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Contents, Page 5. Index to Advertisements, Page 6. Publicity Dept., Page 20

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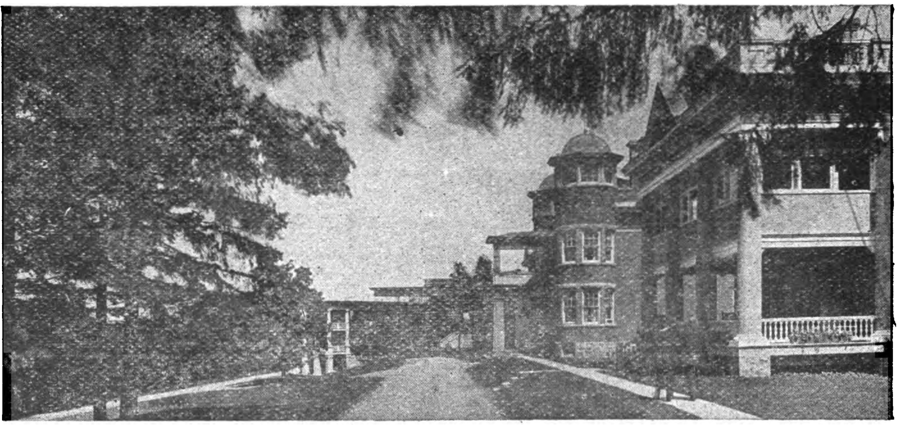

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CONTENTS FOR AUGUST, 1918

Original Articles

Adulterated and Misbranded Foods. By Charles D. Aaron, Sc. D., M. D., F. A. C. P., Detroit, Mich. 1
The Relation of the Inhalation Anesthetics to Modern Dental Surgery. By Harry R. Trick, M. D., F. A. C. S., Buffalo, N. Y. 8
Typhoid Due to Laboratory Inoculation. By Dr. Andy Hall, Capt. M. R. C., Mt. Vernon, Ill. 12

Editorial

The Heart After the War 13
Post Bellum Problems 17

Book Reviews 19
Topics of Public Interest 23
Society Meetings 30
Personals 31
Military Personals 31
Obituary 32
Abstracts, on advertising pages and 33
Our Contemporaries 38

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INDEX TO ADVERTISEMENTS

Manufacturers of Drugs, etc.

Battle & Co.............................24
Bayer 8
Breitenbach Co. 17
Bristol-Meyers Co. 23
Carnrick Co., G. W., New York....... 3
Daniel, John B., Inc....................24
Denver Chemical Co......................15
Dios Chemical Co....................... 7
Dugdale, Frederick 27
Dixson, John B......................... 5
Fairchild Bros. & Foster....Front Cover
Farwell & Rhines....................... 4
Fellows 18
H.-O. Co..................Cover page 2
Katharmon Chemical Co...................10
Mellier Drug Co.........................13
Mulford, H. K., Co......................19
Od Chemical Co..........................11
Parke, Davis & Co.........Cover page 4
Peacock Chemical Co.....................16
Purdue Frederick Co.......Cover page 3
Richardson Co. 11
Sherman, G. H., M. D....................24
Smith, Martin H......................12-27
Southport Chemical Co.................. 5
Sultan Drug Co..........................22
Tilden Co. 9

Instruments, Prosthetic Appliances, Lenses, etc.

(Buffalo unless specified)

Davis & Geck, Inc.......................27
Electro Surgical Instrument Co.,
Rochester 5
Fox, Geo. R., Optician..................23
Kredo Co., Auburn, N. Y.,...............27
Storm, Katherine L., Philadelphia....11

Druggists

(Buffalo unless specified)

Brooks Pharmacy 27
Kreuz, Peter J..........................27

Automobiles and Supplies

(Buffalo unless specified)

Eisenhans Battery Exchange..........27
Emery Mfg. Co., Bradford, Pa........27

College

University of Buffalo—Dental Dept....14
University of Buffalo—Medical Dept...14

Hospitals, Sanitariums, Hotels

Chalfonte, Atlantic City................28
Glen Springs, Watkins, N. Y.........28
Homewood Sanitarium, Guelph, Ont.,
cover page 2
Marshall Sanitarium, Troy, N. Y.....28
McMichael's, Dr. Sanatorium, Buffalo 28
Steuben Sanitarium, Hornell..........28
Waukesha Moor Baths, Waukesha,
Wis. 18

Milk, Etc.

(Buffalo unless specified)

Borden's Condensed Milk Co., N. Y.
and Buffalo 12
Wheat's Ice Cream Co....................21

Undertakers

(Buffalo unless specified)

Sauerwein, Henry 4
Farnsworth, W. H....................... 4
Schlager & Son......................... 4

Miscellaneous

(Buffalo unless specified)

Brainard, Harry, Insurance............23
Connor, R. H. & Co..................... 4
Desbecker 27
Samuel Newman, Tailor...................23
Scheuermann Co., Inc....................12
Worthington & Sill, Insurance......... 4

Water

(Buffalo unless specified)

Hudor Co. 21
Mountain Valley Water Co., N. Y....16

Publishers

Albany Medical Annals...................23
Detroit Medical Journal.................21

BUFFALO MEDICAL JOURNAL

Yearly Volume 74 AUGUST, 1918 Number 1

ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Adulterated and Misbranded Food*

By CHARLES D. AARON, Sc. D., M. D., F. A. C. P.

Professor of Gastroenterology and Dietetics in the Detroit College of Medicine and Surgery, Detroit, Mich.

It is admitted by both manufacturers and consumers that artificial means are absolutely unnecessary for the preservation of food. But selfishness and politics have tried for years to discredit the good work done by the Bureau of Chemistry of the Department of Agriculture designed to promote the national health. The laity should know that the use of harmful drugs makes it possible for manufacturers to convert decaying fruits and vegetables into jellies and catsups which look good and taste fairly good, but are unwholesome. They should know that manufacturers take filthy, rancid, rotten, frowy butter and "renovate" it into so-called dairy and creamery butter.

The American Association for the Promotion of Purity in Food Products has declared that chemical preservatives are not necessary for the conservation of the essential features in food products.

That adulterated food does harm, no one can deny. Alum in bread, formaldehyde in milk, salicylic acid and benzoic acid in meats, borax in cheese, coloring matter in butter, acids in smoked meats, copper in pickles, etc.. are simple illustrations. The medical press throughout the United States has commented on the subject—but widely varying opinions have been expressed as to the degree of harmfulness of the

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*Read before the Detroit Academy of Medicine, February 26, 1918.

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food preservatives. Some writers take the ground that boric and salicylic acid, even when contained in considerable quantities in foods, are much less harmful than the toxins of putrefaction which sometimes develop if the preservatives are not used. The French law on this subject regards the addition of any preservative to food as deleterious on the ground that any such substance must inhibit the action of the gastric and intestinal juices and thus delay digestion.

The subject, however, is a complicated one. One expert, for instance, declares that he believes the addition of large quantities of antiseptics to food is in the main deleterious, yet there are certain foods, he says, in which it is a distinct advantage. He cites catsup, which is ordinarily sold in a package of sufficient size to last a small family for several days, perhaps weeks. If no antiseptics were used in its preparation, as soon as the bottle was opened fermentation would be set up and the contents soon spoil. This condiment, he declares, is used in small quantities, and the amount of salicylic acid or other antiseptic any individual would obtain is inconsiderable. This reasonable statement of the value of antiseptics shows that no sweeping general rule can be applied in prohibiting the use of such substances. But their extensive use is admittedly harmful; in samples of butter examined, from sixty to eighty grains of boric acid to the pound have been found.

The necessity of preserving food-stuffs is more acute today than in early times, though there never was a time when it was not an urgent problem. Food is not always naturally available when needed. Not only must vegetables, fruits, and nuts be gathered, but their supply varies with the season of the year. Most foods require preparation to render them not only palatable, but even digestible; and evidently the aboriginal tribes in this latitude were under the necessity of storing summer food or doing without it at other seasons. But our difficulties increase as our necessities multiply. The great demand for "preserved" food in ancient times is evidenced by the fact that there were frequent famines; transportation was extremely slow and men were dependent upon the products of their husbandry.

Inasmuch as the succession of seasons, the intervals between harvests, and the distances from the sources of supply compel man to store and transport food products, and since these are more or less perishable, the necessity of artificially preserving these foods from decay is apparent.

Today ships must be provisioned, the camps, the army, navy and marine, the hospitals and places of detention; our allies must be supplied, and the preparation and preservation of food has developed on a large scale and into a specialty.

One of the most important and oldest foods is bread. When we get it from the baker's it has no very great keeping qualities, but in its original form it was one of the best preserved foods. The primitive bread was not fermented; it was simply the flour from some grain mixed with water and exposed to heat. Essentially we have the same thing today in the ordinary cracker, also in the "hard-tack" of the army and navy. In this particular civilization has made little progress.

There are two great reasons why food is adulterated: First, to give it an appeal to our fanciful taste; second, to make it more profitable to the manufacturer.

The adulteration of food for both these purposes has been known for generations, for we know that even the Romans adulterated food and traded it with the Greeks.

There are four methods of preserving meat:

1st. Curing with condimental substances.
2nd. Treatment with chemical substances.
3rd. Sterilization by heat.
4th. Drying.

Salt is the condiment most commonly used. Salt does not inhibit the enzymic action that tends to ripen meat. Sugar is occasionally used with salt.

2nd. Chemicals are used as germicides. Small quantities do not impart taste or odor to the meat; they make it look fresh on the outside while changes of a dangerous character may be going on within.

3rd. Sterilization by heat is the safest and best method.

4th. Drying is the most ancient and popular method.

The essential point in all these methods is that the food should from the start be free of all decomposition.

People do not seem to have the least conception as to the materials and methods formerly used in the adulteration of food. Sausages are adulterated to keep them from decomposing and at the same time give them that red color which is so attractive. "Freez-em" was a secret combination of salts sprinkled on roasts, chicken, geese, pork, ets., to keep them for a week. A solution of "Freez-em" will keep oysters fresh for a couple of weeks. "Cold Storine" and "Bull Meat Flour" are "guaranteed" meat preservatives. "Best Bull Beef Binder" makes two hundred pounds of sausage out of one hundred pounds of meat and preserves it under all conditions of the weather for ten days. The coloring used under various names is mainly carmin.

Much of the smoked meat sold has never seen the inside of a smoke-house. Some of the substances used to give it the smoky flavor are "Zanzibar Carbon," "Deems," "Mallory's," "Krauser's" and many others. To smoke the meat, simply hang it up and paint it every day for three days with one of the above-named solutions. At the end of this time the meat will be smoked most effectively—of a good color and an agreeable odor and taste. Pyroligneous acid, which is crude wood acetic acid, is the main ingredient in these preservatives. Sodium sulphite, calcium sulphite, boric and salicylic acids and benzoic acid with coloring matter are other preservatives. Clams, lobster, and fish can all be treated with these chemicals.

In all canned meat it is wise to test the reaction of the jelly. If this be alkaline then decomposition has taken place and the meat is unfit for use. Another test is to open the can under water; if any bubbles rise, this is a sign that the meat has undergone putrefaction and is unfit for use. One great danger of artificial preservatives is due to the fact that they do not penetrate to the bone. This part will decompose and toxins be produced. The natural method of preservation affects all the parts. The smallest particle of bacterial toxin is sufficient to produce prostration and poisonous symptoms of great severity.

Much of the so-called Russian caviar is made from sturgeon roe at Sandusky, Ohio, or at some port on the great lakes. In some cases the caviar is made in Russia from eggs sent there from America. Very little real Russian caviar finds its way into the American market.

Much of the Camembert cheese, supposed to be imported, is really made in the United States. The law now compels the manufacturer to state on the label where it came from. When this law went into effect the Camembert makers had a large stock of labels on their hands. Unblushingly they defaced the fine Parisian French on the labels and printed across it in very black ink the words "Camembert Type Cheese. Made in the United States." Now, however, they must state in good English, that the cheese is as near like that made in France as possible, and the consumer knows what he is getting.

Formaldehyde is the preservative usually added to milk. It evaporates when the containers are open. For this reason larger quantities of it are used in open containers than in closed ones. "Freez-em," "Busy Bee," "Giant" and many other so-called secret preparations owe their efficacy to formaldehyde. Salicylic acid and boric acid are quite commonly used as preservatives. Gelatin is the basis of substances used to adulterate cream to make it thicker. It is sold in the shops under the name "Eureka" or "Victor." It is also frequently used to thicken skim milk. Bismarck Brown is the coloring matter used for coloring butter, and there are many vegetable colorings used. Butterine and oleomargarine are artificial butter, made up of oleo (from beef fat) churned with lard, milk and salt. The oleo oil, however, frequently contains cotton-seed oil, so that even oleomargarine may be adulterated. Paraffin is frequently added to oleomargarine to give it a firm appearance. Renovated butter is old butter melted and treated with air to remove the rancid odor. It is frequently kept in the shops in small tubs, and sometimes sold as dairy butter. The paper wrapped around the tub, impressing the customer as an evidence of cleanliness, serves to cover the label.

In canned goods the object is to retain the taste and color of the original article. Bulging of a can is quite suggestive of decomposition. Catsup, sauces and pickles have coloring added to them. Alum is added to pickles to harden them. Horseradish and turnip are added to catsup as an adulterant. Copper sulphate is added to give the green color to pickles and the boiling of peas in a copper kettle will cause them to retain their green color.

Jams and jellies are adulterated with refuse apple jelly. Coloring matter and gelatin are added to make them attractive.

Honey has been palmed off on the public which was only 1% genuine—on top—the rest being glucose. This adulteration is a fraud on the public, but it is not injurious to health. Gelatin, cane sugar, and glucose are used to adulterate honey. Stained honey is easily adulterated. A simple test is to add strong alcohol; if the specimen is pure honey, it will mix with only a slight precipitate, while glucose leaves a heavy precipitate of dextrin.

Glucose and coloring matters are used in nearly all candies as adulterants. Syrups are adulterated with glucose. Cheap cane sugar is colored with caramel. Lard is adulterated with cotton-seed oil and beef fat. Tallows and fats bleached absolutely white mix easily with lard.

The above illustrations will give an idea of how food has been adulterated in this country. After many debates a pure food law was finally secured. Sentiment had at last been aroused and a bill was passed. We can hardly realize the tremendous opposition which financially interested parties put up against the bill. The manufacturers of food preparations soon found it more difficult to humbug the people. The pure food bill was passed by both houses of congress in 1906. It prevents the manufacture, sale or transportation of adulterated, misbranded, poisonous or deleterious foods, drugs, medicine, and liquors. Immediately after the passage of this law the United States Department of Agriculture began to regulate its operation by designating what, according to the meaning of the law, is adulterated and what is not. It was also necessary to decide what constituted misbranding. This was an enormous work and it has not yet been entirely completed. To give you some idea of the many discriminations that must be made, let me say that sugar can be used in the preparation of any food product, but not for fraudulent purposes. For example, the addition of sugar to sweet corn in canning is forbidden unless the fact is stated on the label. Vegetables kept green by the use of copper are allowed to enter the United States if the label states this fact. Flour blended by the use of nitrogen peroxide is adulterated and cannot be sold under the pure food law.

After a long series of experiments conducted by the government through one of its bureaus designed by law for the purpose, and following the enactment of the food and drugs act, articles of food preserved by benzoate of soda were excluded from interstate commerce as being deleterious to the public health.

This action on the part of the government was embarrassing to two distinct commercial interests—namely, the manufacturers of benzoate of soda and the manufacturers of food products of inferior quality. These interests protested to the government that the original experiments were either defective or at least not conclusive that benzoate of soda as a food preservative was deleterious within the meaning of the law, and demanded a re-investigation of the subject at the hands of an independent commission. The government acceded to this demand and appointed several of the best known physiologic chemists as a referee board of consulting scientific experts with instructions to determine whether or not a food to which benzoate of soda had been added in either large or small quantities contains, by virtue of that fact, "any added poisonous or other deleterious ingredients which may render said food injurious to health." This referee board then conducted, or caused to be conducted, a series of experiments and at the conclusion of these experiments filed a report unreservedly favorable to benzoate of soda as a food preservative. The government, being virtually precommitted to the findings of its own referees, was thereby induced to rescind its decision and on March 3, 1909, issued a decision to the effect that no objection would be raised to "the use in food of benzoate of soda provided that each container or package of such food is plainly labeled to show the presence and amount of benzoate of soda."

This decision is far-reaching. It affects not only many millions of capital, but the health and lives of many more millions of people. It involves, furthermore, so serious a step as the reversal by a great government of its previously deliberately determined policy. The government may go without criticism as being justified by the report of its chosen referees, but the report upon which so momentous a decision was based must become the object of critical scrutiny.

It is important to remember that benzoate of soda, by virtue of its property as a powerful antiseptic, was used and, since the removal of the ban by the government, is again being used as a preservative of food. Experience amply proves that sound fruits and vegetables, including catsup from sound tomatoes, can be made to keep without the addition of benzoate of soda or any other deleterious medicament. Unsound fruit and slush from canning factories, slush that ought to go only into the sewer, can now be preserved, sold, and extensively consumed as articles of food, by the simple process of first treating them with benzoate of soda. It is to be remembered that the utilization of material which, without the use of benzoate of soda, must go to waste, represents a large margin of profit to certain selfishly commercialized interests, and this fact accounts in large part for the pressure brought to bear upon the government to reverse its original position.

Our government now allows the food manufacturers to use benzoate of soda for adulterating any of our foods and in this respect we are practically back where we were before the pure food law was passed.

This does not imply that the pure food and drug law is useless; far from that. If it did nothing but prevent misbranding of food and drugs, it would be valuable. We do not see mineral waters now advertised as curealls as in former days. Many of these waters claimed on their labels to cure all stomach, liver, kidney and bladder troubles, rheumatism, gout, and blood diseases. These claims the government declared false and fraudulent.

During these war times there is a fear that our Pure Food and Drugs Act will not be properly enforced. I am glad to note, however, that the Bureau of Chemistry of the Department of Agriculture is giving its full attention to the law, as some of its late reports clearly show. Efficient government protection along these lines, especially during the war, is of great benefit to the public, and is appreciated by the medical and pharmacal professions.

The Relation of the Inhalation Anesthetics to Modern Dental Surgery.

By HARRY R. TRICK, M. D., F. A. C. S.,

Buffalo, New York.

Instructor in Oral Surgery, Dental Department; Instructor
in General Surgery, Medical Department, University
of Buffalo. Assistant Attending Surgeon,
Buffalo General Hospital.

It is very difficult, if not quite impossible, for the present-day surgeon to visualize the handicaps under which those worked who practiced in the pre-anesthetic days.

Our occasional experience of performing some slight operation without an anesthetic will give us a faint idea of the harrowing experiences they were frequently obliged to undergo and from which there seemed to be no escape.

A thoughtful consideration of their predicament should excite little wonder that they generally attempted to evade what many times must have seemed to be their real duty, and instead to perform hurried, incomplete and sacrificial operations as compared to the deliberate, thorough, and conservative procedures of today.

The wonder is that they were able to do so well as they did!

We all can bear witness to the statement that of all the pains to which flesh is heir, none is more unnerving than the pain incident to some acute dental pathology and the attempt to combat or remove this pathology without the aid of some anesthetic causes a shock to the patient that may be difficult to overcome and a loss of nervous energy in the surgeon that frequently repeated would lead to exhaustion.

It must have been because of the relatively frequent repetition of such experiences that the hope was kept constantly in their minds that some day some pain-killing substance would be produced, but their experiences did not prompt many of them to make any very serious attempt to discover it.

Even if we make all manner of generous excuses for them we must admit that their faith was too child-like, if not censurable, because—"We must all remember that the thought of painless surgery did not burst upon the world **de novo** in the year 1846 when Morton gave the first public demonstration of ether anesthesia. Running through all medical history, there is a constant reference to the abolishing of pain, and even among the ancients many fairly successful attempts were made.''

Viewed from our standpoint, another inexplicable oversight was the fact that for a number of years prior to 1846 it had been the custom to give what were known as ''ether frolics'' as part of an evening's entertainment and to exhibit the effects of laughing-gas on the stage and in halls of learning.

It frequently happened that during these exhibitions some of the participants would be severely bruised without apparently being aware of the injury and this fact was noted and commented upon, but it remained for Horace Wells, a dentist of Hartford, Conn., to apply these facts to his professional needs.

Unfortunately, his attempted demonstration in the Massachusetts General Hospital was a failure, probably due to faulty technique, and the general use of nitrous-oxide in surgery was thereby considerably delayed.

Morton, however, worked along different lines. He seems to have been of a crafty nature. He was familiar with the work of Wells, in fact, they had been at one time partners, but he was not satisfied with the effects of nitrous-oxide as then administered, so he continued a search for a more satisfactory agent.

He received the suggestion to use sulphuric ether from Dr. Chas. T. Jackson, a prominent and versatile physician of Boston, who acted as preceptor to Morton when he matriculated in Harvard Medical School.

Morton immediately tried out the effect of ether on himself and sundry patients. He also experimented with a variety of masks for its administration and continued to receive valuable advice and information from Dr. Jackson but all these various endeavors he carried out furtively, until the time of the public demonstration at the Massachusetts General Hospital, October 16, 1846. Even then he attempted to make it appear that he had discovered a new and mysterious drug by disguising the odor with aromatic oils and naming the combination ''letheon.''

The effect of the announcement of the success of the demonstration was electrical and was the direct cause of the subsequent exhibition of the most sordid greed by all the parties named.

Horace Wells and E. E. Marcy of Hartford had also been using ether at this time but considered it too dangerous, although, they did not discontinue its use until it had been suggested to Valentine Mott who referred to it in a paper published in the Boston Medical and Surgical Journal in 1845.

It also appears that Dr. Crawford Long, a practicing physician of Jefferson, Jackson County, Georgia, had used ether in surgical practice even as early as 1842, but made no formal report of his experience until so late that he just prevented Morton receiving an appropriation from the Congress of the United States.

In a Commemorative Address delivered at the Medical Department of the University of Buffalo, October 16, 1896, Roswell Park said:

"There probably is every reason to think that, either by accident or design, a condition of greater or less insensibility to pain had been produced between 1820 and 1846, by a number of different people, educated and ignorant, but that no one had the originality or the hardihood to push these investigations to the point of determining the real usefulness of ether. This was partly from ignorance, partly from fear, and partly because of the generally accepted impossibility of producing safe insensibility to pain. So, while independent claims sprang up from various sources, made by aspirants for honors in this direction, it is undoubtedly as properly due to Morton to credit him with the introduction of this agent as an anesthetic as to credit Columbus with the discovery of the New World, in spite of certain evidences that some portions of the American continent had been touched upon by adventurous voyagers before Columbus ever saw it."

Sir James Paget has summed up the relative claims of these four contestants very tersely in an article entitled "Escape from Pain," published in the **Nineteenth Century** for December 1879.

He says:

"While Long waited, and Wells turned back, and Jackson was thinking, and those to whom they had talked were neither acting nor thinking, Morton, the practical man, went to work and worked resolutely. He gave ether successfully in severe surgical operations; he loudly proclaimed his deeds and he compelled mankind to hear him."

Thus, an impartial verdict, rendered long after the heat of the discussion, extends the honor of introducing the inhalation anesthetics for the relief of suffering humanity, to Dr. Wm. T. G. Morton.

That is his reward and in a way it is quite in keeping with the immeasurable debt humanity owes for such a blessing.

It should not be overlooked that the words **anesthetic** and

anesthesia were after-thoughts and were suggested by Dr. Oliver Wendell Holmes.

A number of similar substances were promptly put in the field but ether, nitrous-oxide, chloroform, and ethyl chloride still hold the popular confidence.

The effect on the dental profession was staggering. Literally thousands decided to make dentistry their life work. The places for instruction were swamped.

Although there had been for a number of years a few dental colleges in the country they were separate schools and it was not until 1868 that "Harvard did what she ought to have done at the outset. She opened a dental department and began the teaching of dentistry as a branch of medicine, establishing therefore a separate degree; D. M. D., (Dentariae Medicinae Doctor). In 1874 the University of Michigan established a dental department, and a little later the University of Pennsylvania did the same."

Other schools followed rapidly. The Dental Department of the University of Buffalo was established in 1892, at which time there were between forty and fifty dental colleges in the United States, most of which owed their origin quite directly to the increased demand for instruction above noted.

This enormously increased field of usefulness imposed certain obligations, such as better preparation for the study of dentistry and an improved and extended curriculum, all of which, I am proud to say have been met in a very satisfactory way.

Although the present high place in medicine that dentistry occupies can be credited to the inhalation anesthetics, their use in dentistry has been largely reserved for the more formidable procedures since the introduction of cocaine by Koller at the Congress of German Oculists in Heidelberg in 1884.

Under these circumstances, when the decision rests on an inhalation anesthetic, the respnosibility should be divided with a trained anesthetist and he should decide on the particular anesthetic to be used and the method of its administration.

In any instance the method of administration should be the simplest possible to meet the indications.

To my mind simplicity of administration has a salutary psychic effect that cannot be ignored and the psychic side of anesthesia is a most important one.

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Typhoid Due to Laboratory Inoculation.

Dr. ANDY HALL, Mt. Vernon, Ill., Capt. M. R. C.

A colleague of the writer, accustomed to preparing autogenous vaccines and maintaining typhoid cultures, shook a culture tube to distribute the sediment and wet the cotton stopper. He washed his hands with soap and water immediately but used no antiseptic and soon after, rolled and smoked a cigarette. Exactly three weeks later, he noticed the first malaise and found that his temperature was 101. The next day, he felt worse but kept about as usual till later in the day fhen the temperature was 102. He then sought advice and was sent to a hospital. The course of the disease was typic though rather mild. The maximum temperature was 103.5; rose spots appeared, in all about 50 confined to the abdomen; there was no delirium, diarrhoea nor haemorrhage; the subjective symptoms were rather marked, consisting especially of pain in the nape of the neck. Defervescence occurred in three weeks, full recovery in five. Expectant treatment was employed.

An interesting postscript is that, 8 years later, the patient reacted rather severely to triple typhoid inoculation, though this is said to be the rule and the general opinion seems to be that the reaction is due especially to the para-typhoid element.

In this connection may be mentioned the case of another physician who had never had typhoid but who, several years ago received a (non-military) triple typhoid inoculation. A short but rather severe febrile period followed which was pretty definitely explained by a failure to kill all of one of the para-typhoid cultures though the evidence was circumstantial and, naturally, more or less contradicted by statements of the source of the vaccine. This man had an exacerbation of a neuritis immediately following the triple typhoid inoculation. It is obvious that typhoid or para-typhoid from cultures, even if no attempt to kill had been made, would naturally be expected to be somewhat milder than cases derived from ordinary sources of infection, with the virulence of the organism heightened by recent passage through the animal body. A careful collection of laboratory workers' infections might, however, show the a priori view to be incorrect and, even in such a case as the first mentioned, the severity, though not marked, was as great as in many spontaneously infected cases.

BUFFALO MEDICAL JOURNAL

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The Heart After the War.

Reports are unanimous as to the general health and increase in physical development and resistance of men suddenly transferred from civil to military life. Even if the former habits have not included much exercise, the great majority of men even of middle age, as in the Medical Reserve Corps, have readily adapted themselves to the average increase in physical demands. It should be considered, however, that the pendulum has swung back from a period with industrial and social tendencies to sedentary occupations with little exercise to a very general interest in extra-vocational physical training of one kind or another. Thus, the outbreak of the present war, probably found our country with at least as great an average muscular development as at the time of the Civil War when a relatively larger proportion of the population was engaged in agriculture and other occupations necessitating physical strength, and with a much higher average of physical health and general resistance, which are by no means synonymous with muscular strength.

Barring actual discoverable lesions, as of the heart, vessels, lungs, kidneys, thyroid, liver, etc., and deformities, mutilations, defects of special senses, etc., which more or less definitely exclude from military service though not necessarily involving the general health, the vast majority of failures to stand the strain of military life may be placed under the old term of irritable heart or under the newer English term of Effort Syndrome, meaning that the heart and vascular system and, to a certain extent, also, the respiratory functions, do not easily meet the sudden increased strain so that, without demonstrable disease and without necessarily preventing the performance of ordinary civil duties of the individual, even if he has broken down under military training or has passed the period of training and has broken down in actual service at the front, he is useless as a soldier. While no statistics have been published either for the British or our own troops, it may be said that the Effort Syndrome involves an appreciable though small proportion of soldiers and that the last sentence requires qualification as about 60% of those involved are returned to duty after rest and a course in graduated exercises of the general nature of calisthenics and setting up exercises, drugs and rest treatment in the limited sense having been found to be useless.

Medical men scarcely need to be told that the heart normally hypertrophies very readily to meet increased demands but it has been a surprise to many, that this response occurs, either in athletics or military training very rapidly, even in a month, in the vast majority of all cases, even when the previous habits have been strictly sedentary and when only the most rudimentary precautions have been taken to prevent undue and sudden strain; also that even the failures have seldom resulted in either temporary incapacity or permanent damage of any degree.

Pierre Nadal, in a series of articles in the Jour. de Med. de Bordeaux, has considered especially the physical training of "intellectuals." While, in the main, he says nothing that is not obvious as to general principles and that is not included in descriptions of calisthenic and especially setting up exercises, including the special adaptations to the Effort Syndrome, some of his points might be overlooked. The necessity of developing articular suppleness as well as muscular strength; of securing instant obedience to commands, of properly coordinating movements and of excluding certain habits of improper coordination and inhibition, of psychic and psycho-neural as well as gross muscular response, etc., might be missed especially by one attacking the subject without actual experience. One detail of his seems especially important: catching the breath, on attempting a difficult and especially a straining task, is not really a normal reflex but one which should be overcome by training as it obviously—when we stop to reflect—diminishes the supply of oxygen and immediate elimination of waste and imposes additional cardio-vascular strain, at the very time when the most favorable conditions are demanded. Another point which might be neglected and which, we believe, has been in some military commands, is the importance of nutrition and hygiene concomitant with physical development. A large part of the minor morbidity of camps, predisposing also to serious infections, especially with pneumonia and influenza, has been ascribed by military critics to chill following the inevitable perspiration of drills, especially when the routine prevented bathing and change of clothing for the major part of the day or when the soldier was, on account of fatigue and lack of time that could be spared from sleep, tempted to sleep in damp underwear.

We venture to predict that the health and resistance of our troops, even without attention to these details, will be much better for the second winter, even for the first winter in service of men trained during the whole summer and fall, and that the routine of the front, when exercise is mostly combined with the psychic stimulation of actual fighting and when periods of service alternate with those of rest and attention to hygienic details, will result in less morbidity than cantonment life. Thus the general prediction may be made that the transformation of a civilian young male adult population into soldiers, will result in very little loss, after that incident to the weeding out of genuine defectives, though most of these are not defectives according to the demands of the ordinary vocations to which they have been adapted. Even this is not a military loss of serious moment, since it is not at all likely that we shall be required to raise even half of the theoretic "militia" of 10% of the total population and since a large percentage of the adult population must, by any country that does not rely to an undue degree upon the labor of women and children or of enslaved aliens, be retained in civil occupations, even if we look no farther ahead than military necessity.

In civil practice—and undoubtedly military—physiologic hypertrophy of the heart is not merely a theory nor even a demonstration from the standpoint of general pathology. It is something readily detected by clinical methods—perhaps most convincingly by the X-ray, but also by percussion, either ordinary or auscultatory. In particular the left border of the heart of an athlete or of one who has done much muscular work, is 1-2 c.m. outside the line established by one who has not used his muscles to any degree. This difference can even be noted in the same individual after a few months, perhaps a few weeks, of exercise. The pathologic principle (pathologic only in the sense that the matter is usually included in the teaching of pathology) that the heart readily hypertrophies in response to stimuli has an unfortunate corollary, that the hypertrophied heart does not so readily atrophy, without actual degenerative changes, when the continued stimulus is withdrawn. Moreover, we must reckon with a general hypertrophy of the vascular apparatus, not so easily demonstrated even histologically except for the larger trunks and almost undemonstrable clinically. Even if it were conceded that the vessels participated only functionally in the increased circulatory response, we should still have to consider that the viscera and other organs have adapted themselves to a greater circulatory activity, including all that this implies from the standpoint of respiration, and that the reflex response of all organs, especially those of nutrition and elimination, have become attuned to grosser excito-reflex impressions, and that the regulation of the physical apparatuses in general has been effected by innervational discharges from which comparatively little has been subtracted for intellectual work.

The actual lesions and functional disturbances to which ex-athletes and those who have changed from muscular to brain work, or from active to sedentary occupations, are liable, have been described in many articles though the profession and hygienists generally do not yet seem to realize fully the importance of this subject. It would be out of place in an editorial article, to enter into details, but it is important that the general subject should receive due attention in advance of the immediate need of considering the personal health of the two or three million men who will be restored to civil life in what we hope will be the comparatively near future. This subject should also receive attention from the standpoint of the discussion as to universal military training, for it is something more than an aggregation of personal needs for guidance. It involves sociologic problems that tend to ramify. Off-hand, we are inclined to believe that the only solution of the problem, whether for the athlete, the muscle worker who retires or who changes his vocation at an early age, or for the soldier adjusting himself to civil life, is a moderate continuance of physical work and an avoidance of the toxaemias of alcohol, tobacco, and of preventable diseases and unhygienic modes of living. The first factor is more important than it seems. It is easy to advise, but difficult to carry out without involving a large amount of wasted efficiency unless the physical work can be rendered of practical value in some way and right here, the problem begins to ramify along all sorts of industrial, sociologic and almost political lines. But it, as well as the other factors, must be made operative, or else great harm will result to many individuals and a not negligible amount to posterity.

Post Bellum Problems.

If, in time of peace, a country should prepare for war, it is equally important, in time of war, to prepare for peace. Such preparation by no means implies an excess of optimism as to the date when the war will end, though it may be said that it is scarcely conceivable that it will last too long to allow delay in beginning the discussion of the major problems of readjustment to peace conditions.

SHALL STANDARDS OF MEDICAL EDUCATION BE REDUCED? This is not an academic question but one which has been seriously raised. According to standards of graduation long in vogue among our Allies, the war almost immediately reduced the supply of physicians to a minimum for the civil population and has already left even the armies with a relative shortage, though this has been compensated by various means, including a supply from our own formerly redundant profession. Even in our own country, the supply of military medical men by volunteering has just about reached the limit of purely voluntary action, concomitant with the raising of the force at first announced (2 million) and the additional contingent already provided for.

The temptation is strong, therefore, to stimulate the production of more physicians by lowering educational standards and shortening the period of medical study, even if the actual amount of work is not diminished. From the purely military standpoint, even a genuine lowering of standards of technical instruction would be justified, as a large part of the work of army surgeons could be arranged so as to assign to any individual the repetition of a comparatively simple task with ample provision not only for perfecting him in its performance but with the necessary discipline to prevent his essaying other work beyond his ability. Moreover, the military service includes both clinical and didactic instruction which would bring even an imperfectly educated physician up to the requisite standard for civil practice, in a period of a year or two.

However, it is a safe rule always to suspect unworthy motives behind any plea for degrading medical standards and military necessity should not be conceded as a valid argument until it is presented by proper authority, in unmistakable terms. Here is one point in regard to which there should be no anticipation of necessity.

With any such duration of the war as now seems at all probable, there will be comparatively little actual wastage of physicians—probably not much over 2% per annum, and indeed, not much if any more than the mortality of the older men remaining in civil practice. Reconstruction work on returned soldiers will probably be just about balanced by the greater health of the remainder of the army and their acquired training in hygiene, immunization against typhoid, etc. With the almost complete cessation of immigration —representing fully half of the previous increase of our population—for a period of at least five years, the slight but still appreciable check on births, the actual loss by death in the army, and, more important than all else, the adjustment of civil practice in its various manifestations including hospital service, to a much smaller staff, the sudden return of 1 physician to about 100 men, will obviously disturb the economic relations of profession and laity. On the other hand, there will have been, according to the tendency of increasing educational requirements for the last decade or so, a gradual reduction of physicians to total population and there will probably be a greater, relatively permanent withdrawal of physicians from private to public duties than of men from civil to military professional care. Just how ratios will balance against the presumptive diminution of sickness and the increased efficiency of professional distribution, can be determined only by experience. But, unless the war is protracted far beyond the time now generally regarded as possible, it is plain that very serious economic detriment would result to the profesion from the attempt to increase medical graduation by lowering standards. In short, most of the good that has been accomplished by ten years of hard work and skillful management would be lost. It should also be considered that no hastening of graduation and increase of students that would be even tolerable from the ultimate standpoint of securing men that would deserve the title of physician, could operate immediately to relieve the necessity of still further drawing on the existing personnel of the profession to any marked degree. Such a process could not yield any appreciable increase of available surgeons for almost a year, nor reach the maximum indicated by military needs within four years and it is doubtful if it could be checked within four years more. A very slight additional pressure to secure volunteers from the extant profession would secure better results for at least two years and it is scarcely to be doubted that the war will either be over in that time or a better estimate of its duration and needs can be made than at present.

New Mercurial. Louis Bory and Albert Jacquet, Le Prog. Med., Dec. 1, 1917, report favorably on ortho-amido-benzoate of mercury, dose 4-6 c.g. a day.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

The Treatment of War Wounds. By W. W. Keen, M. D., L.L.D., Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia. Second Edition, Reset. 12mo 276 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $2.00 net.

Within about six months after the appearance of the first edition, a new edition, largely rewritten, has been called for. Major Keen has filled his book with facts obtained by communication with surgeons engaged in actual war work. The Carrel-Dakin method is given in the minutest detail, as well as acriflavine, mercurophen, eupad, eusol, dichloramin-T, tetanus and gas gangrene prophylaxis, the use and preparation of No. 7 Paraffin for burns, the localization and removal of foreign bodies by X-rays, and the treatment of wounds in various locations. A number of personal letters from experts in the service add much to the interest and value of this most timely volume.

The Ungeared Mind. By Robert Howland Chase, A. M., M. D., Physician-in-Chief Friends Hospital (for Mental Diseases). Cloth. Price, $2.75 net. Pp. 351, with 6 illustrations. Philadelphia: F. A. Davis Company, 1918.

Under this comprehensive caption the author has gathered together a few chapters comprising "the observations and experiences of a lifetime." He writes for the general reader as well as for the physician who is interested particularly in psychology and its problems. With a genial outlook on the seamy side of life and a whimsical sympathy with minds that are out of gear, he has given us a mass of material unusual in any book and calculated to entertain as well as instruct the reader. The book is not a manual of a textbook, but he who reads it for knowledge will find unexpected supplies,—bits of wisdom not announced on the title page or noted in the index.

Emergencies of a General Practice, by Nathan Clark Morse, A. B., M. D., F. A. C. S., Surgeon to Emergency Hospital, Eldora, Iowa; District Surgeon Chicago Northwestern Railway, Minneapolis & St. Louis Railway; Ex-President Iowa State Association of Railway Surgeons, etc. Author of "Post-Operative Treatment." Cloth, 8vo, 449 pages, 251 illustrations. St. Louis, C. V. Mosby Co., 1918. Price, $4.50.

This book covers in a most practical manner about all the emergencies likely to confront the general practitioner. Foreign bodies, asphyxiation, surgical and medical emergencies, food poisoning, burns, thermic fever, convulsions, bites, stings, retention of urine, etc., are all dealt with in a ready way. There is a chapter on obstetrical emergencies, and nearly a hundred pages on the treatment of poisoning. Fractures, dislocations and amputations are considered from an emergency standpoint. The value of the book is enhanced by the author's rich experience in dealing with the conditions that he describes.

1917 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 866 pages, 331 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $6.50 net.

This is Volume IX of the Mayo Clinics. It presents 81 monographs on a wide range of topics—from the transplantation of whole organs to the war's influence on medicine. A fair balance is maintained between medical and surgical articles, and there are several papers of especial interest to the laboratory expert. The reviewer feels rewarded by a perusal of the paper by the Editor of this volume, Mrs. M. H. Mellish, on "Medical Journals from the Standpoint of the Contributor." If its spirit could be carried into practice it would bring about a much better understanding between the contributor and the editor who publishes his contribution; and the readers of medical journals would benefit by the result.

The Essentials of Materia Medica and Therapeutics for Nurses, by John Foote, M. D., Assistant Professor of Therapeutics and Materia Medica, Georgetown University School of Medicine; Instructor in Materia Medica and Therapeutics, Providence Hospital Training School for Nurses. Third edition, revised, enlarged and reset. Cloth, 310 pages, price, $1.75. Philadelphia: J. B. Lippincott Co., 1918.

This edition conforms to the Ninth Revision of the U. S. Pharmacopoeia, and gives also the official name of each drug recognized in the European pharmacopoeias. It is up to date, contains such information as nurses need concerning the newer preparations used in European military surgery, and will prove most useful to nurses as a textbook and a book of reference.

Cancer: Its Nature, Causes, Diagnosis and Treatment. By Robert Holmes Greene, A. M., M. D., F. A. C. S., Emeritus Professor of Surgery, Medical Department of Fordham University. Cloth, 172 pages, price, $1.50. New York: James T. Dougherty, 1918.

In preparing this little book the author has had the cooperation of John A. Killian, Ph. D., Pathological Chemist at the House of Calvary for Cancer. The cause and nature of cancer are briefly discussed. Under the head of diagnosis, the authors present their methods of determining the total sulphur and the neutral sulphur in the urine. This determination is of great diagnostic significance to them because of the fact that an increase of the percentage of neutral sulphur in the urine is found to exist in the presence of cancer, as a general rule, while the total amount of sulphur excreted is diminished. It is evident that carcinoma disturbs the normal balance between the sulphur components. This fact is very useful in making an early diagnosis of cancer. In the treatment of cancer, early operation is recommended in suitable cases. Where medicinal measures are indicated, the author favors the use of oxidizing agents like Selenium and Tellurium. The book is written in a spirit of fairness and the personal views of the authors are put forth modestly, without extravagant claims. There should be an index.

Interpretation of Dental and Maxillary Roentgenograms, by Robert H. Ivy, M. D., D. D. S., Major, Medical Reserve Corps, United States Army; Associate Surgeon, Columbia Hospital, Milwaukee; formerly Instructor in Oral Surgery, University of Pennsylvania. Cloth, 146 pages, 259 illustrations. Price, $2.50. St. Louis: C. V. Mosby Company, 1918.

The author believes that it is easier to make a good roentgenogram than to interpret it, and he devotes his book to the latter part of the specialty and limits his field to the teeth and jaws. There are two excellent chapters on the anatomy and pathology of these regions, after which two-thirds of the book is given to the interpretation of roentgenographic findings about the teeth and jaws, as illustrated in over 200 excellent reproductions of films and plates. The volume is a model of book making and a boon to the student of this essential factor in the diagnosis of dental conditions.

Oral Sepsis in Its Relationship to Systemic Disease, by William W. Duke, M. D., Ph. B., Kansas City, Mo., Professor of Experimental Medicine in the University of Kansas School of Medicine; Professor in the Department of Medicine in Western Dental College, etc. Cloth, 124 pages, 170 illustrations. Price, $2.50. St. Louis: C. V. Mosby Company, 1918.

The teachings of this book are based on the study of more than one thousand medical cases from whom over eight thousand dental films were taken. The author believes, as a result of these consultations and studies, "that the teeth should be taken into account in nearly every medical case." He writes clearly and convincingly on pyorrhea alveolaris, alveolar abscesses, metastatic infection, toxic effect or oral sepsis, and the influence of oral sepsis on nonrelated infection, headache, and other conditions. The illustrations are photographed from roentgenograms—clearly made and clearly interpreted. A copious bibliography and index complete this most elegant and effective contribution to an important branch of medicine and dentistry.

The Treatment of Cavernous and Plexiform Angiomata by the Injection of Boiling Water (Wyeth Method), by Francis Reder, M. D., F. A. C. S., Visiting Surgeon to City Hospital; Consulting Surgeon to St. John's Hospital and Missouri Baptist Sanitarium, St. Louis. Cloth, 12mo, 75 pages, 26 illustrations. Price, $1.50. St. Louis: C. V. Mosby Company, 1918.

Dr. John A. Wyeth contributes a brief introduction to this brochure. The author discusses angiomata in some detail and describes the Wyeth method with the aid of photographs from his own cases. He says, "Of 104 cases subjected to this method, I have had no failures to record." The book is a sufficient guide to the technic of boiling water injections, and its utility is enhanced by an index.

Progressive Medicine—a quarterly digest, etc., edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Vol. II, June, 1918. Paper, 376 pages, illustrated. Price, $6.00 per annum. Philadelphia: Lea & Febiger, 1918.

Contents: hernia; surgery of the abdomen, exclusive of hernia; gynecology; disorders of nutrition and metabolism; —diseases of the glands of internal secretion, diseases of the blood and spleen; ophthalmology.

TOPICS OF PUBLIC INTEREST

Casualties on the Western Front are said by Maesfield to average 10 a minute (about equally divided between the contestants)—representing about one killed and one permanently disabled or captured for each side, or a total of 5 million for both sides, or definitive losses of 1 million for each side.

Influence of War on Migration.

	Immigration of Aliens	Non-Immigrants arriving	Total arrivals	Total departures Emigrants and other	
1913	1,387,318	229,585	1,616,903	283,378=	1,033,525
1914 omitted as not typic.					
1915	258,678	68,963	327,641	284,636=	43,005
1916	355,587	72,904	428,491	164,784=	263,707
1917	152,959	58,926	211,885	131,183=	80,702
					net arrivals.

In estimates of growth of population, it should be remembered that, approximately, our increase has been about 20% per decade, which does not mean quite 2% per annum, any more than it would for a problem in compound interest. It should also be remembered that about half of this increase has been due to immigration. The present census decade will have been subject to the 20% increase for just about 1/3 of the period and to a 10% increase for the remaining 2/3, as it seems unlikely that any appreciable immigration will be possible before 1920, not to mention our military losses which will probably not be very high. We anticipate, therefore that various vital statistics carried by estimates, will prove to have considerable inaccuracies, when checked up at the next census year.

Belligerent and Neutral Population of the World. In round numbers, the Central allies have 160, millions; the Entente Allies 1,360, millions, neutrals number 120, millions, the total population being 1,600, millions. It must be admitted that many of the subjects of the Entente Allies are savage or barbarian, in a cultural, not a kultural sense and that many nations will not take an active part in the fight. But with all allowance, the only logical conclusions to the outcome of the war is the optimistic one.

The U. S. Public Health Service (for the first time, we believe) announces examinations for women for the position of acting assistant surgeon, corresponding approximately to the commission as first lieutenant in the Army Medical Corps.

Cremation. The first English society was founded in 1874, the first crematory in the U. S. 2 years later. From 1876 to 1884 only 28 cremations occurred in this country. 58 the next year, 1005 in 1895 and from this date, there has been a very steady rise to 12,767 in 1915, not quite 1% of all deaths. More recent statistics are not yet available.

Precocious Venereal Disease. E. Finger, Wiener Med. Woch., Mch. 9, states that since the war began, the ratio per 1000 of young subjects showing venereal disease has increased from 1 to 8 for boys aged 15; from 3 to 9 for 16; from 11 to 26 for 17; from 27 to 68 for 18; aggregates from 42 to 111. For girls, as might be expected, the increase has been proportionately less though absolutely more: 12-16 at age 15; 22-40 at 16; 33-66 at 17; 62-91 at 18; aggregates from 129 to 213. As previously noted, juvenile crime in general has increased in Germany on account of the war and probably the same has occurred in other countries. This should be a caution to us.

Horse Meat. About 1000 butcher shops in Paris deal exclusively in horse and ass meat, the average sales being 4-5 carcasses a week for each.

Medical and Other Incomes. In 1917, 61% of engineers (civil, mining, etc.) reported incomes over $3,000. Other percentages were: insurance agents, 28; stock and bond brokers and other brokers, 20; lawyers and judges, 19; mine owners and operators, 18; manufacturers and manufacturers, 10; architects, 8.5; army and navy officers and the medical profession (20,348 reporting) 7; editors, authors and reporters 6.5; commercial travelers and real estate dealers, merchants, etc., 4.5; saloon keepers 1.9; clergymen 1.4; actors and musicians 0.55; teachers 0.47; farmers 0.24. It will be noted that the percentages are merely for those making returns at all. Thus, if the returns are honestly made, the actual percentage of physicians earning $3000 or more, net, is 1%.

A New Collar Insignia has been adopted for the Army Air Service. It consists of a pair of horizontal bronze wings, similar in shape to a colonel's eagle's wings, with a silver two-blade propeller placed vertically on the wings. It will be worn by officers and enlisted men of the Department of

Military Aeronautics and the Bureau of Aircraft Production, and it takes the place of the torch and crossed flags worn by them when under the Signal Corps. The hat card for enlisted men of these two branches of the air service will be green and black.

Persons desiring to send money to prisoners of war in territory controlled by the Central Powers should send it through the Bureau of Prisoner Relief of the American Red Cross, Washington. This society has been granted a license for such business by the War Trade Board.

A Special Cap, officially known as the "over-seas cap," is now being worn by the soldiers of the American Expeditionary Forces. It matches the uniform in color, is round and has no brim or peak. The crown is made very low and made so that when not in use, it can be folded and carried in the pocket. It is made but not issued in this country.

A Military Postal Express Service has been established. This service will receive from the civil postal authorities all mail arriving in France for the American Expeditionary Forces and distribute it.

The Public Health Service urges all physicians to report all communicable diseases, no matter how small, as a protection to the selected and enlisted men who are traveling and who could carry the germs back to camp.

A Problem for Antivivisectionists. Laboratory animals are now somewhat difficult to get. They are needed to save the lives of soldiers. For example, up to date, we have probably lost more men by pneumonia than by hostile weapons and missiles of all kinds. One type of pneumonia is very successfully treated by a serum, while the other three types are not. It is obviously necessary to determine which type a man has in order to apply the proper treatment, and the type is determined mainly by culture in animals. This is admittedly somewhat hard on the animal though the injection is not painful to a high degree, if indeed it can be described as more than uncomfortable. The suggestion comes from the laboratory men themselves that it would save a large expense and inconvenience and perhaps human lives by saving time, if, instead of determining the type of penumonia by animal cultures, it could be done by some form of test tube experiment which would not involve animal life at all. If the antivivisectionists are sincere, here is a chance for them to show their humanity both to man and the lower animals in a way that is also patriotic and that will help win the war just as directly as the invention of an armor that will prevent a certain number of fatalities by rifle balls. Such an accomplishment would be of great abstract scientific value and it would, in its general principles and probably in its practical developments apply to many other diseases. Suppose the antivivisectionists devoted part of their funds to finding substitutes for animal experiments of this kind instead of putting it up to the medical profession to spare the animals and let human beings die.

Venereal Diseases—N. Y. State Law. According to the new law, effective April 17, only licensed physicians may treat or prescribe for such diseases; pharmacists filling prescriptions are to retain them, no copy being given to the patient and no prescription to be refilled.

Infant Mortality for N. Y. City. In 1907—the mortality was 135.8 per 1000 births, in 1917, the minimum was reached —88.8.

The Attendance at the 1918 A. M. A. Meeting was 5,553, the largest in the history of the organization except the previous Chicago meeting of 1908 when the registration was about 800 more. This attendance is remarkable in view of the large number of physicians who have entered military service.

Military Orders. Men newly commissioned in the M. R. C. do not generally understand the importance of preserving and keeping instantly available for reference, the orders, telegraphic or otherwise, directing travel, duty, etc.

Statistics of Troops Abroad. It seems that the U. S. has successfully camouflaged the movement of troops by telling the truth and allowing outsiders to make estimates on various statistics, from sick reports, etc., for which just enough actual numbers were given to mislead spies and the innocently curious. Up to Aug. 1, 1917, at which date "those who claimed to know" estimated at least 50,000, 26,967 had sailed. Up to Nov. 1, when the press was allowed to state that upwards of 100,000 had sailed and when it was semi-publicly announced by the wise ones that about 400,000 had crossed, the actual number was 116,072. Up to Feb. 1, when calculations by difference between the totals of all three military organizations and the numbers publicly shown to be in this country, made it appear that somewhere between 600,000 and 700,000 had crossed, the actual number was 234,704. Up to May 1, the number, as announced, was just about 500,000 and, up to July 1, the total is 1,019,113.

Lynchings. Robert R. Moton, Principal of Tuskegee Institute, states that 35 have occurred in the first six months of 1918, similar periods of the last two years being 14 and 35, respectively. 34 of the persons lynched were colored, including 3 women. 8 lynchings were for rape. If no general appeal for respect of law avails, it ought to be realized that there is, during the war, a special patriotic reason for refraining from lynchings, more particularly when lynchings are excused as due to indignation against unpatriotic deeds. Every lynching in the U. S. affords our enemy an excuse for lynching in Europe.

Railroad Accidents. 206,000 persons were injured and 1000 killed in 1917, a reduction of about 20% from 1916.

The Possibility of Census Camouflage. Various statistics, partly emanating from Germany, partly estimated on the general basis of an average equality of military losses on the two sides, partly based on number of divisions, agree pretty closely with total definitive German losses of about 4 million, leaving about 3 million of the original 10% militia strength, the draft of youths just about balancing non-military losses. It has been suggested that Germany had 90 instead of about 67 millions population at the outbreak of the war. A difference of this degree obviously could not have been concealed between any two decennial censuses and it would produce inconsistencies in vital statistics, even in food consumption and industrial statistics generally. Such a proportionate discrepancy would undoubtedly have been detected if applied to small communities, especially near the border and with the careful watch which the various European powers have kept on one another for many years, it is questionable whether a census camouflage even begun many years ago, could have been successfully carried out. However, the question is an interesting one, academically, aside from its bearing on the possible duration of the war.

Trench Fever. From various reports and original articles, the following facts are gathered. No specific germ has been isolated nor is there evidence that a known germ causes the symptoms. But the disease seems to be an infection, transmitted by louse bite as 12 of 22 healthy volunteers became infected and 15 of 16 into whom direct inoculations of virus were made. 4 bitten by lice imported from England remained free of disease. The incubation period was 5-20 days by direct inoculation; 15-35 days by louse bite.

Sugar. 1,600,000 tons are estimated as available for the last half of 1918 for the U. S.—about 15 grams per meal per person, something like half the average consumption, a third of the ordinary consumption and a fifth of that of persons who maintain an excessive sugar ingestion without developing manifest disease.

The Woman Physician in Moving Pictures. Mme. Petrova, in the Inner Life combines the beauty and wealth of a prominent woman physician of one eastern city with the bacteriologic skill (somewhat exaggerated in therapeutic results, of course) of another woman physician.

What Will Win the War. We agree with the slogans that food, or wheat or some other food in particular, or thrift, or investment in Liberty Bonds and War Savings Stamps, or laughter, or prayer, or garbage saving or a host of other things will win the war. But we would qualify this agreement with the belief that the real thing that will win the war will be fighting in the front lines. Probably medical, surgical and sanitary skill represent the next most direct factor. For one qualified along these lines, his value is obviously far greater as an indirect than as a direct fighter. The country needs more physicians and while, in one way or another, it can use men of all ages, what is most needed is fairly young men who will volunteer for service in the M. R. C. The reserve supply now consists of a comparatively small number, not much over a thousand, and more than a third of these are over 40 or physically disqualified for service at the front.

The Government has arranged the Base Hospitals of this country as follows: General Hospital No. 4, Fort Porter, N. Y. will care for the insane; No. 7, Roland Park, Baltimore, will care for the blind and deaf; No. 13, Dansville, N. Y., will care for epileptics and neurotics; the Walter Reed Hospital at Tacpma Park, Washington, D. C. and the Letterman General Hospital, San Francisco, will make special provision for amputation work. Other hospitals chosen are General Hospital No. 2, Ft. McHenry, Mo.; No. 3, Cononio, N. J.; No. 6, Ft. McPherson, Ga.; No. 9, Lakewood, N. J.; No. 14, Ft. Oglethorpe, Ga.; Army and Navy General Hospital, Hot

Springs, Ark.; Base Hospital, Des Moines, Ia.; Base Hospital, Ft. Riley, Kan., and Base Hospital, Ft. Sam Houston, Tex. Individual hospitals from this group will be equipped for special work in cardivascular diseases, tuberculosis, neurological and other head surgery cases, for speech defects, general medicine, and other specialties.

Packages for Overseas Delivery not accepted unless accompanied by a written request from the soldier and approved by a major or higher commanding officer. Persons connected with the Red Cross and other organizations in France, must make a request for articles in a similar manner, the approval of an executive officer of the organization being necessary in such case.

Dr. Biggs, State Commissioner of Health urges that people inquire as to the purity of the water and milk supply, the safe disposal of refuse and other sanitary conditions that affect the health, before choosing a vacation spot.

The Medical Department in France had mobile apparatus to provide fresh water for the soldiers. The trains and miniature waterworks, which chemically treat, filter and sterilize water, making it fit for consumption. A number of purification units with attached motor-tank trucks constitute a train. Each unit is a complete filtration plant including laboratory. Arriving at a stream it sets hose into the water and pumps the water through a pressure tank. Before the water passes through a sand filter it is treated chemically to rid it of disease germs. The pure water is pumped into tanks mounted on trucks, which carry the water to the soldiers. Each mobile water unit carries an expert chemist, bacteriologist, and pump man. There is a complete laboratory in the front of the machine for the testing of the water. Tests are made every two hours or more often when it is thought necessary. The water is lifted into the filter by a gasoline pump engine, and a complete supply of extra pipes and tools are carried so that all repairs, either from accident or shell fire can be made on the spot. The trucks are equipped with electric lights so that the work can be carried on at night.

Women Health Officers, whose duty will be to see that the thousands of women workers in munitions plants are kept healthy and their output of war materials thus maintained at the peak of production, are to be trained under the direction of the women's division of the industrial service section of the Army Ordnance Department. The women who are taking the course are college graduates, or women of equivalent technical education. Almost all have had experience in dealing with working women.

Secretary Baker now prohibits the serving of liquors to officers and men of the Army anywhere in the U. S., even within private homes.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

The Chemung Co. Medical Society has increased its professional fees, making house visits $2.00; night visits $4.00 and maternity cases, minimum fee $25.00.

Buffalo Academy of Medicine, Meeting June 28th. Subject: "The Physical Training of the Public School Children."

The Lake Keuka Medical and Surgical Assn. held its 19th annual meeting at Gibson's Landing, Lake Keuka, July 26-7. Drs. Howard L. Prince, Rochester; M. M. Lucid, Cortland; Walter B. Weidler, New York; M. P. Messinger, Oakfield; Robert Knight, Seneca Falls; A. McKenzie, Montreal; T. F. Laurie, Auburn; A. H. Paine, Rochester; Harvey Jack, Hornell; W. J. Johnson, Batavia, and Ledra Heazlit, Auburn, read papers.

The twenty-eighth annual session of the **New York and New England Association of Railway Surgeons** will be held at the Hotel McAlpine, New York City, on Oct. 21st. A symposium will be presented on the "Modern Treatment of Infected Wounds." Dr. J. S. Hill, President, Bellows Falls, Vermont; Geo. Chaffee, Cor. Sec., Little Meadows, Pa.

The American Gastro-Enterologic Assn. has elected the following officers: Pres. Walter A. Bastedo, N. Y. City; Vice-Pres. Thos R. Brown, Baltimore, and Franklin W. White, Boston; Sec.-Treas. Frank Smithies, Chicago; Recorder, Horace W. Soper, St. Louis.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Charles Haase of Elmira has recovered from an attack of Articular Rheumatism which laid him up for three months.

Drs. Lee Kinner, Carl Zimmerman, Arthur C. Glover and D. J. Tillou of Elmira have received commissions in the M. R. C. Dr. Zimmerman underwent an operation for hernia so that he would be accepted.

Dr. Louis J. Boyer announces the removal of his office and residence to 449 Delaware Ave. Practice limited to ear, nose and throat diseases.

Dr. C. Spencer Kinney delivered the graduation address to the hospital nurses of Middletown, N. Y. late in June. Dr. Kinney was for many years on the medical staff of the Middletown State Homeopathic Hospital. Since 1900 he has conducted the Eastern Sanitarium at Easton, Pa.

Dr. James Wright Putnam of Buffalo will serve until Sept. 1 in the military hospital at Williamsbridge.

Dr. Floyd Roberts of Lancaster was so unfortunate as to run down a little girl in Silver Springs, July 1. He was driving slowly and the child darted in front of his auto, from behind a line of parked cars, so that no blame attaches to him.

Capt. Elmer J. Preston of Corning, who was commissioned in the M. R. C. about a year ago, served for some months with British troops, later with the Am. Expeditionary Force. He was reported a German prisoner late in June.

MILITARY PERSONALS

Col. J. G. Adami of Montreal, our associate editor for Canada, has completed the first volume of the history of the Canadian Army Medical Corps.

To Biltmore, N. C., Lieut. Lyman H. Wheeler, Lockport.

To Camp Dix, Lieut. Ira W. Livermore, Gowanda.

To Camp Jackson, S. C., Lieuts. Harold J. McDonald, Buffalo; Frank Walz, Buffalo.

To Camp Raritan, Metuchen, N. J., Lieut. Thos M. Calladine, Perry.

To Camp Wadsworth, Lieut. Harold Johnson, Friendship; Capt. Wm. F. Plumley, Rochester; Lieut. Lee Sachs, Buffalo.

To Camp Zachary Taylor, Louisville, Ky., Capt. Maurice B. Barnett, Watertown.

To Camp Sherman, O., Lieut. Carl G. Frost, Buffalo.

To Camp May, N. J., Capt. Lee M. Francis, Buffalo; Lieut. James C. Sullivan, Buffalo.

To Fort Leavenworth, Lieut. Daniel Jung, Buffalo.

To Fort Oglethorpe, Ga., Lieuts. Francis M. Kujawa, Buffalo; Francis J. Robinson, Rochester; Wm. W. Weglem, Rome; Herman E. Oak, S. Onondaga.

To Camp Meade, Lieut. Frederick Schenkelberger, Gowanda.

To Fort Porter, N. Y., Capt. Clarence H. Mackay, Lancaster.

To New Haven, Conn., Lieut. James H. Stygall, Buffalo.

To Newport News, Lieut. Abraham Silverman, Syracuse.

To Rockefeller Institute, Lieut. Wm. J. Galvin, Oswego.

To Washington, Lieut. Benjamin Slater, Rochester.

To Camp Gordon, Lieut. Joseph Zimmerman, Buffalo.

To Fort Sam Houston, Lieut. Ralph Gregorius, Corning.

To New York City, Lieut. Julius T. Cohen, Buffalo.

To Walter Reed General Hospital, Capt. Frederick Filsinger, Buffalo.

To Camp Devens, Lieuts. Myron Thompson, Albert R. Ellison, Buffalo.

To Fort Bliss, Capt. Wm. Woodbury, Rochester.

To Plattsburg Barracks, Capt. James Munson, Sonyea.

Capt. A. L. Benedict, of the editorial staff of this journal, has been transferred from Camp Greenleaf, Ga., to the Gas Defense Plant, Long Island City. He, with various other soldiers, enjoyed the hospitality of the Bristol (Va.) Red Cross Chapter in passing through that city.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Joseph Painter Creveling, Michigan 1870, died suddenly of apoplexy at his home in Auburn, Mch. 30, aged 70.

Dr. Adelbert Dalton Atwood, Buffalo 1879, died in Brooklyn, April 28, aged 68.

Dr. Paul Carpenter of Pittsford, N. Y. died June 4, age 52. He graduated from the Jefferson Medical College in 1867.

Dr. Fred Rice of Ripley was fatally injured on June 21st when his auto was struck by a Buffalo & Lake Erie traction car near Westfield. He graduated from the Buffalo University in 1902.

Dr. Albert E. Stafford of Whitesbore, N. Y. died recently, age 41. He graduated from the University of Syracuse.

Dr. John Moroney of Auburn, died May 23, age 66. He graduated from the Long Island College Hospital in 1874.

ABSTRACTS

Indefinite Pain. Smith, E. B., Medical Council. Writing of pain, he says, "Pain can only be present where there is involvement of the sensory nervous system and is due to one of three conditions, or possibly at times all three included; injury, irritation or starvation. The first is usually evident to the naked eye; the second, if localized, may be also, but if central must come under the third reading, which can only be discovered by urinary examination." Much stress is laid on the old supposition of lithemia; an excess of uric acid or urates, as being the cause. He says, "This old theory should be abandoned, especially in view of the fact that the true condition can be discovered in a very few minutes by an estimation of the alkaline phosphates which show nerve-cell metabolism; this is easily accomplished by use of the Dowd Phosphatometer." Regarding irritation and starvation of the nerve cells, the condition that must be ascertained by alkaline estimation he says, "In fully 90 per cent. of these cases an index will be found divided about as follows: 75% due to starvation which call for nerve-cell nutrition, (Phosphorus he advises as the ideal remedy), and 15% to irritation, a condition (showing plus on the phosphatometer practically) always accompanied by high blood pressure, and calling for sedatives, as the bromide of gold and arsenic." He reports several cases in each group, which after months of treatment by other measures were not only relieved of indefinite pain, and when accompanied by high blood pressure, this, in a goodly number of cases, was reduced at once.

Arseno-Benzol and Salvarsan in Treatment of Non-Syphilitic Diseases. Le Monde Med. of Paris mentions, editorially, with citation of clinical evidence, framboesia, relapsing fever, Vincent's angina, malaria, and the following subjudice: actinomycosis, gonorrhoea, pernicious anaemia and leukaemia, anthrax, chorea, diphtheria, scarlet fever, variola, noma, Leischmanniasis, various cutaneous infections. It is worth while to remember that the trend of modern therapeutics is, as we have discussed editorially in the past, distinctly toward the old conception of specifics but with these two practical qualifications: the necessity of individual treatment and the allowance for failures is more clearly recognized even in the statement of ideals; a remedy may be strictly specific from the indications of a particular disease and yet be equally specific toward another disease. It is not beyond the limit of possibility that some one chemic substance may prove, in the practical sense, specific for all infections. It should be clearly appreciated that the scientific objection to the idea of specifics, is not so much from the therapeutic as from the diagnostic standpoint. That is to say, there is no essential reason why there should not be some one remedy which is "good for" some one condition. But a given disease name does not by any means identify the actual pathologic state to be combatted—pneumonia, for instance, although for syphilis even this objection scarcely holds good, if due allowance be made for the stage of the disease or rather as to the question of whether we still have an actual infection or the remains of an infection to treat. Also, the proper clinical term for a diseased condition may include several quite distinct, coincident processes, each of which demands its own specific treatment. Perhaps a more conservative and less objectionable way of stating the same fact is that, for almost any distinct pathologic process which may be considered as a unit, whether organic or functional, there is some one remedy which, in the aggregate, is the best available and there is no general scientific reason why, for any such disease-unit there may not be considered possible some new discovery which will be ideally successful, within the ordinary range of allowance for human imperfection. This allowance excludes the possibility of successful, eleventh-hour therapeutics of conditions that have become obviously and rationally incurable, the indefinite extension of viability of senile organisms and it includes a percentage of failure under obviously overpowering conditions. When we call to mind the tremendous reduction of mortality in meningitis, tetanus and other diseases of like prognosis, the success in prophylaxis of variola and small pox, of abortion of implanted infections such as gonorrhoea, syphilis, tetanus, gas bacillus infection, etc., the curability of malaria and syphilis, even the results from certain forms of destructive therapeutics, aside from mechanic removal in cancer, it will be realized that considerable practical progress has already been made toward the attainment of the essential ideal of specifics and that the term should no longer be regarded as a superstition of past ages. Not only has this progress been made in a very short period in relation to the existence of human life in the world but in a phenomenally short time in relation to the development of scientific knowledge along the lines that alone could render the fulfillment of the ancient dream of specifics possible without the assumption of pure luck or supernatural agencies.

Rare and New Lung Diseases. The Maryland Med. Jour., Jan. 1918, editorially calls attention to the following: Fibrous Bronchiolitis, first recognized 1901, showing greyish white nodules resembling military tubercles on section, the same casting shadows by X-rays, this disease following irritating gases, measles and pertussia. Principal symptoms dyspnoea and cyanosis. Pulmonary Blastomycosis not recognized much before 1914, resembling acute tuberculosis in onset and signs, but microscopically negative as to tubercle bacilli and often positive as to blastomyces. KI and tonics may help. Coccidioid Granuloma, known in California for about 21 years, usually begins like pulmonary tuberculosis, later developing skin lesions. All pulmonary cases thus far observed have been fatal. Pulmonary Aspergillosis, known for about 20 years, begins like bronchitis, with cough, sputum soon becomes purulent and blood-streaked, indigestion, night sweats, evening fever, emaciation, bronchial dilatation. Haemoptysis may be the initial symptom. It may be relieved spontaneously, leaving induration. KI and as advised. Sporotrichosis may simulate tuberculosis, as to cough, sputum, apical dullness and rales. Differentiation by identification of fungus. Organism thrives on some vegetables and has apparently been conveyed by handling coffee. Chiefly reported from Mississippi Valley. Streptotrichosis strongly resembles tuberculosis. Organisms frequent on food stuffs and may lodge in tonsillar crypts. It may invade a single apex and gradually spread to other parts of the lungs. Diastomiasis occurs in Asiatics, who may live 30 years with this disease or become spontaneously cured. Thus far, it has not been reported in native Americans or other foreigners. Actinomyeosis, long known and well described but liable to be confused with tuberculosis. Never diagnose a pulmonary infection without examination of sputum—and, we may add, the examination should be repeated sufficiently often.

Sarcoma of the Prostate is reported by B. de Saussine in the Arch. de Med. des Enfants, in a boy 4½ years old. The irritation at first caused frequent voiding of urine but dysuria followed and complete retention requiring the use of the catheter developed in two weeks from the onset of symptoms. Death occurred from ascending infection. Necropsy showed a tumor as large as a mandarin orange, surrounding the prostatic urethra, purulent systitis and some pyelonephritis.

Radiographic Examination of Recruits. "From a study of 977 cases we believe that the following conclusions are justified:

"1. That it is practical to make X-Ray examinations of the chests of soldiers at the rate of two cases per minute.

"2. That while six men were used in this series, the number could easily be reduced to four, and only one of them need be a Roentgenologist.

"3. That one man can easily develop one hundred plates every three hours.

"4. That an individual can interpret plates at the rate of two per minute, leaving the rejected or doubtful cases for further study.

"5. That in the 977 cases examined we found 3.6% of the cases with definite tuberculosis, sufficient to disqualify them for military service, and an additional 3.2% with tuberculosis which will require further interpretation and observation to determine whether their tuberculosis should disqualify them or not."

(Signed) Lewis Gregory Cole,
Major M. R. C. U. S. A.

Banti's Disease. Chas. Norris et al., Am. Jour. Med. Sci., Dec. 1917, consider that this is neither clinically nor anatomically an entity, the argument being obvious to any one who is inclined to doubt the propriety either of starting with a peculiar and rare case to find other cases to match, or with a definition depending on the coincidence of unusual conditions, and of giving his own or a technical name to the symptom complex. It seems, however, that they ascribe rather too much importance to syphilis as an explanation of the symptom complex of Banti's disease.

Perthe's Disease. C. B. Francisco of Kansas City, Med. Herald, Jan. 1918, reviews the literature brieflly. The disease is a benign deforming osteochondritis, due to delayed ossification of the epiphysis and juxta-ephiphyseal cartilage of the neck and an isolated area of the acetabulum, characterized by slight limp and pain. 80% of cases occur in boys between 5 and 10. Diagnosis is established by Roentgenology. Extension and massage, without fixation are the means advised.

Gastro-Enterostomy. C. W. Lippman of San Francisco, Calif. State Jour. of Med., Jan. 1918, analyses 100 cases: 17 required re-operation, 3 for return of ulcers, one gastrojejunal and two in the stomach itself, 6 for adhesions found, 5 for symptoms supposed to signify adhesions but in which none were found, 3 for too large or relaxed stoma; 12 more were not relieved though further operation was not indicated, making 29 bad results. 8 cases resulted fatally, 12 could not be followed up and 51 gave good results. The last included 12 of stenosis of the pylorus for which gastro-enterostomy is a logical operation granting that the lesion itself cannot be directly attacked. So far as peptic ulcer is concerned, there were 39 successful and 37 unsuccessful cases. Of the 8 fatal cases, 4 were moribund at the time of operation, 1 each died of haemorrhage and of peritonitis, 2 of shock and 4 of pneumonia.

Tuberculous Meningitis Treated by Sterilized Air. Felix Ramond and Francois have treated 9 patients by withdrawing about 40 c.c. of fluid by lumbar puncture and injecting air sterilized by passage through a red hot platinum canula, sufficiently long to allow cooling to room temperature before reaching the cerebro-spinal space. They warn against the consequent change in volume if the air is injected at temperatures much different from that of the body. They admit that all the cases died but temporary improvement was noted in one. The analogy to the treatment of tuberculous peritonitis is obvious.

Contusion of Penis by Water. Peyre, Jour. de Med. de Bordeaux, Dec. 5, 1917, reports a workman subjected to a pressure of 150,000 kilos. There was rupture laterally, an enormous haematoma and haematuria developed. The outcome is not stated.

Blood Pressure Sign in Pneumothorax and Pleural Effusion. Williamson, London Lancet, says that while ordinarily the blood pressure in the arms and legs is nearly the same, distention of the pleura causes a diminution of 10-20 m.m. pressure in the leg as compared with the arm of the same side. At first thought, this seems natural but even the crudest conception of vascular anatomy leads us to inquire as to the explanation and, especially whether, if direct pressure on the aorta acts as a mechanic cause, why the pressure is not equally reduced in both legs. If this sign is corroborated, the explanation must be sought in a rather recondite innervational phenomena, through the vaso-motor nerves.

Intra-Venous Injections in the 18th Century, and Earlier. Le Progres Medical, Dec. 22, 1917, reproduces an illustration from Laurence Heister's Surgery, published 1750, showing, somewhat diagramatically, the veins of the elbow and anterior surface of the arm distended by a tourniquet, the left hand of the surgeon holding a trochar introduced into a vein, while the right hand is squeezing a bladder connected with the trochar. The method is, however, much older, Heister himself alluding to it as somewhat dangerous and fallen into desuetude, after having enjoyed a considerable vogue about 1660-1680, and being ascribed to Major or Wrenn. It seems to have been employed chiefly in apoplexy and dyspnoea, when deglutition was difficult or impossible, also to avoid the action of the digestive juices on medicaments. Leprosy, gout, epilepsy, consumption, scurvy, venereal disease (the various ones being strangely confused by most authors in the 17th and early 18th centuries) and malignant fevers are also mentioned. Purmann practiced the method successfully on himself but the general experience was that sudden death or stupidity, delirium or melancholy might develop and the French Senate officially condemned the use of intravenous medication. (Note: Aside from the more obvious factors connected with ignorance of asepsis, embolism, etc., it should be remembered that the success of this and many other procedures in medicine depends to a large degree upon the availability of rubber whose introduction lies within the memory of many persons still living. Ed.)

Antiseptic Action of Acriflavine, Proflavine and Brilliant Green. Gulbransen and Thornton, Brit. Med. Jour., states that the antiseptic action is slowly progressive, without interfering with phagocytosis or the welfare of the body cells generally. The flavine compounds may be safely used in the peritoneum and their action is enhanced by the presence of serum while brilliant green, like most other antiseptics has its action reduced by the presence of serum. The practical choice is obvious.

OUR CONTEMPORARIES

Contents and Index of the Philippine Journal of Science, Volume I (1916) to Volume X (1915). Manila. This beautiful index, of 442 pages, is in keeping with the Journal to which it forms a complete guide. A glance at its pages gives one a feeling of pride in the amount and character of scientific work accomplished by our fellow citizens in the Philippines.

Contents, Page 5. Index to Advertisements, Page 6. Publicity Dept., Page 20

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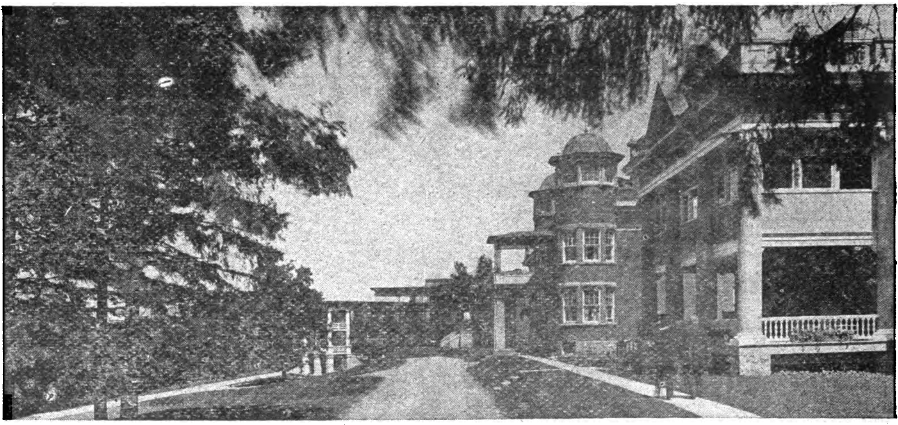

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CONTENTS FOR SEPTEMBER, 1918

Original Articles

Typhus Fever. By Dr. A. L. Lincecum, Captain M. R. C., El Campo, Texas.. 39
The Cancer Menace and What to Do. By J. H. Carstens, M. D., Detroit, Mich. 45
Crime and the Human Family. By Henry J. Girvin, Chief Buffalo Police Department 48

Editorial

Water Filtration 52
Post Bellum Problems 54

Book Reviews 56
Correspondence 58
Topics of Public Interest.......... 59
Personals 70
Military Personals 71
Obituary 72
Society Meetings 73
Abstracts, at end of original articles, on advertising pages and.......... 75

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INDEX TO ADVERTISEMENTS

Manufacturers of Drugs, etc.

Battle & Co. 24
Bayer 8
Breitenbach Co. 17
Bristol-Meyers Co. 23
Carnrick Co., G. W., New York 3
Daniel, John B., Inc. 24
Denver Chemical Co. 15
Dios Chemical Co. 7
Dugdale, Frederick 25
Dixson, John B. 5
Fairchild Bros. & Foster .... Front Cover
Farwell & Rhines 4
Fellows 18
H.-O. Co. .... Cover page 2
Katharmon Chemical Co. 10
Mellier Drug Co. 13
Mulford, H. K., Co. 19
Od Chemical Co. 11
Parke, Davis & Co. .... Cover page 4
Peacock Chemical Co. 16
Purdue Frederick Co. .... Cover page 3
Richardson Co. 11
Sherman, G. H., M. D. 24
Smith, Martin H. 12-25
Southport Chemical Co. 5
Sultan Drug Co. 22
Tilden Co. 9

Instruments, Prosthetic Appliances, Lenses, etc.

(Buffalo unless specified)

Davis & Geck, Inc. 25
Electro Surgical Instrument Co., Rochester 5
Fox, Geo. R., Optician 23
Kredo Co., Auburn, N. Y. 25
Storm, Katherine L., Philadelphia 11

Druggists

(Buffalo unless specified)

Brooks Pharmacy 25
Kreuz, Peter J. 25

Automobiles and Supplies

(Buffalo unless specified)

Eisenhans Battery Exchange 25
Emery Mfg. Co., Bradford, Pa. 25

College

University of Buffalo—Dental Dept. 14
University of Buffalo—Medical Dept. 14

Hospitals, Sanitariums, Hotels

Chalfonte, Atlantic City 26
Glen Springs, Watkins, N. Y. 26
Homewood Sanitarium, Guelph, Ont., cover page 2
Marshall Sanitarium, Troy, N. Y. 26
McMichael's, Dr. Sanatorium, Buffalo 26
Steuben Sanitarium, Hornell 26
Waukesha Moor Baths, Waukesha, Wis. 18

Milk, Etc.

(Buffalo unless specified)

Borden's Condensed Milk Co., N. Y. and Buffalo 12
Wheat's Ice Cream Co. 21

Undertakers

(Buffalo unless specified)

Sauerwein, Henry 4
Farnsworth, W. H. 4
Schlager & Son 4

Miscellaneous

(Buffalo unless specified)

Brainard, Harry, Insurance 23
Connor, R. H. & Co. 4
Desbecker 25
Samuel Newman, Tailor 23
Worthington & Sill, Insurance 4

Water

(Buffalo unless specified)

Hudor Co. 21
Mountain Valley Water Co., N. Y. 16

Publishers

Albany Medical Annals 23
Detroit Medical Journal 21

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Yearly Volume 74 SEPTEMBER, 1918 Number 2

ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Typhus Fever.

DR. A. L. LINCECUM, El Campo, Texas; Captain M. R. C.

Typhus, ship, prison or spotted fever, exists in practically all the civilized countries of the world open to our commerce and from which soldiers are likely to be drawn to the western front. It is an acute infectious fever, unquestionably due to a specific germ but the exact organism has not been demonstrated and it would be idle to speculate as to its nature, whether bacterial or protozoic. However, as with yellow fever, while we do not know the exact organism we do know the method of transmission, namely by the bite of the body louse, apparently not by other species. The bed bug has also been incriminated with some degree of probability and it is possible that other insects may serve as carriers but the disease is no more contagious than yellow fever. In fact, after thorough delousing, I have had patients cared for in houses occupied by persons free from the disease, without their developing it.

Typhus is endemic in Mexico where frequent epidemics occur in winter. It is from this source that the disease is mainly introduced into the southern and southwestern states. At times it is traced or probably due to individual Mexicans or returning Americans who have crossed the border surreptitiously without inspection and delousing. For example, a Mexican was found by a police officer reeling along the streets of a Texas town, was arrested and put into the jail. He died within a few days and was buried without having any special attention directed to his case but, whether he was actually suffering from typhus and whether his arrest for drunkenness was warranted or due to the weakness of disease, or whether he merely served to convey infected lice to the jail, seven other prisoners shortly after his death, developed the disease.

The incubation period of the disease is about 12 days but the danger may persist almost indefinitely in premises in which lice have not been destroyed. Two special sources of menace to the U. S. may be mentioned. Mail bags loaded at, say, Mexico City are shipped under guard of Indians who are practically universally lousy and who sleep on the bags. During the disturbances which have existed in Mexico for several years, various leaders have held back freight cars from the U. S. to transport troops, and lice have been found in these cars even after they had been sealed up for three or four weeks. Paradoxically, the persistence of lice under such circumstances, is due to their habit of destroying one another. They are markedly cannibalistic and it is literally a case of the survival of the fittest. For example, in one experiment, three species of lice and several other insects were placed in a bottle. In the course of a few days, only the most vigorous of one species of lice remained. It is obvious, from the almost universal reports of infestment with lice in the trenches, that it is largely a matter of accident that typhus has not been prominent on the western front as it was in the Balkans and an appreciation of the means of conveyance and of prevention, as well as the ability to recognize the disease early, are matters of military preparedness.

A typic, severe case of typhus begins almost without prodromes; with sudden chill, agonizing pains in the back, head and extremities so that it might well be mistaken for meningitis. Indeed, the differential diagnosis must depend upon the results of examination of spinal fluid withdrawn by lumbar puncture. Muttering delirium or maniacal symptoms may also occur. Or, there may be bronchitis with cough. Again, the disease may be marked by obstinate vomiting and alimentary disturbances. Haemorrhages may occur, either assuming the form of haemoptysis or haematemesis. As in various other general infections, haemorrhagic cases are likely to be malignant. Superimposed typic temperature charts of typhoid and typhus resemble each other greatly at first, though the rise in typhus is usually more rapid and a temperature of 105° is quite uniformly reached on the second or third day, while the morning remissions are less than in typhoid, being very close to one degree below the evening temperature. However, the tongue also resembles that of typhoid in the general initial redness and subsequent light coat and the early differential diagnosis may be extremely difficult; indeed, if typhus is not known to exist, an error in the early stages of the first case encountered is almost inevitable. The Widal reaction cannot be depended upon early as it is rarely present in typhoid till the close of the first week while, in persons already inoculated, only cultures can be relied on to establish the differential diagnosis against typhoid. Later, however, the typhus tongue becomes brown and, about the fourth of fifth day, it has the appearance of being varnished. There is tremor of the protruded tongue and, indeed, of the muscles generally. Thus, according to circumstances, further confusion with either typhoid or meningitis may occur.

The most characteristic point in typhus is the eruption which appears from the second to the fifth day. It is usually first noticed on the abdomen but, on turning the patient over, it will also be seen on all posterior surfaces subjected to most pressure. Thus the patient should always be carefully inspected after turning over. The eruption is, at first, a bluish, mottled discoloration, under the skin, later becoming macular and, according to many authorities, papular, but I have never observed this appearance either in this country or in Mexico where I visited several hospitals in order to study the disease, nor did the Mexican physicians describe the papular stage. Without denying that papules may form, I am inclined to believe that their description has been by anticipation, as the development of a papule from a macule is so probable a priori. About the fourth or fifth day of the eruption, it becomes distinctly petechial, being lighter colored—or, perhaps it would be better to say dimmer—on parts exposed to the air, than on those kept covered by clothing. It will be noted that the eruption includes the haemorrhagic factor already noted as marking special clinical types. Obviously, in certain cases, there may be a confusion with haemorrhagic small pox, especially if typhus attacks an unvaccinated person when small pox is prevalent.

There is almost invariably constipation and a tendency to retention of urine in typhus, incontinence being observed, however, in cases that are rapidly fatal.

After a few days, the temperature chart becomes much more significant diagnostically, the temperature oscillating between 104° and 105° quite regularly for just about 16 days when there is a critical fall, and this is the time of greatest danger in cases that have not overwhelmed the patient within the first few days. Heat and stimulants should be freely used at this stage. It may be questioned whether the more gradual fall of temperature in typhoid is not an essentially conservative factor.

If patients live long enough, remembering that promptly fatal cases do not have time to develop complications and that they are overwhelmed by the general intoxication of the infection without even the development of a morbid anatomy sufficient to explain death, the most frequent complication is broncho-pneumonia. Gangrene of the lungs may occur. There may be suppurating otitis media or various other septic processes and gangrene of the fingers and toes is especially characteristic, according to some, though I must confess that I never saw gangrene in the Mexican hospitals and the general opinion there was that the disease could be pretty sharply divided into maligant, rapidly fatal, cases, and those that go on to crisis at about the 16th day, when recovery or death depends largely on the resistance of the patient and the efficiency of supporting treatment, bearing in mind that a large proportion of the poorer classes of Mexico are insufficiently fed and, even if not literally lacking food, deficient in proteid and accustomed to a badly balanced diet. Many Mexican epidemics have a mortality of 60% and one at San Luis Potosi in 1916 had a mortality of about 87%, explained by an almost total local deficiency in corn and beans and general recourse to whatever foods low in dietetic value could be obtained. Rare complications are nephritis and meningitis.

It may further be remarked that typhus may resemble dengue which is a disease of marked symptoms but almost devoid of danger to life. I recall an isolated case in Texas in which physicians insisted on this diagnosis while a few of us were equally certain that the case was one of typhus. On the fatal termination, some of our opponents rather reluctantly admitted that we might possibly have been right.

The first attempts that we made to prevent the introduction of infection across the border, by lice, were rendered difficult by lack of available funds and were carried out in a somewhat crude, though quite effective way. Large dry-goods boxes were made practically air-tight by pasting paper over the cracks and covering them with tar paper and fumigation with hydrocyanic acid gas was employed, a small charge being made for baggage and for freight or box cars. At first, the space available was sufficient only to fumigate six or eight suit cases at a time. As funds accumulated, a more elaborate steam apparatus was installed.

It is obvious that this method involves danger and can not be employed for delousing human beings. In attacking this problem, it is important to remember that the lice and especially the eggs are to be found especially on hair, the female louse secreting a sort of cement which glues the eggs to the shaft of the hair. This cement is dissolved by acetic acid while the adult insect, like most others, is destroyed by kerosene. Hence we adopted the simple method of spraying with equal parts of vinegar and kerosene, using a pressure atomizer, though thorough rubbing may be practiced if an atomizer is not available. Especially in the case of women, the head was wrapped in a towel for 15 minutes and then a hot shower was used. Xylol and soap, turpentine, oil of cinnamon, even iodoform, and similar substances are reported to have been used in the eradication of lice by the French but none of these means are so effective.

Steam naturally suggests itself for the destruction of lice and their ova in clothing and some such device as the Serbian barrel may be employed but it is difficult to secure a sufficiently high temperature to kill the lice without damaging many articles of clothing. Here again, it is of practical importance to remember that just as lice on the body favor the hairy surfaces, the sites of election in clothing are the seams or similar niduses, as under labels. They may be exterminated, therefore, by sponging and running hot irons along these places.

To prevent infestation with lice under the conditions of trench warfare is a very difficult task, as it depends on universal cleanliness. It has been said that lice will not lay eggs in silk underwear and this I have found to be true but it may also be said with confidence that lice will infest persons without regard to what underwear they select or even if they wear none at all. Some years ago, a commission went from this country to study typhus in Mexico. One of the members died of the disease in Mexico. Another, who had sought to protect himself by wearing silk underwear and by changing it and bathing three times a day and by wearing rubber gloves when investigating cases, came home sick with typhus but eventually recovered. As, even in delousing stations, the lice are apt to fall to the floor and crawl onto another person, some precaution must be observed. We found that the simplest and best was to apply kerosene to the floor. While this does not immediately kill the lice it seems to paralyse them so that they cannot crawl to another person and they soon die.

The treatment of typhus is entirely symptomatic. In Mexico, I found a French proprietary proteid silver combination, supplied in ampoules, largely used hypodermatically but, so far as I could observe, the patients thus treated died as frequently as the average.

One important point in the clinical side of typhus is the entire lack of correspondence between pulse and temperature and, one might almost say, the lack of prognostic value of either. The pulse may remain very near 80, usually very rapid however, throughout the entire febrile period, with the temperature varying only from about 104° to 105°. Even at the time of the dangerous critical fall of temperature, the pulse does not necessarily show much change though, before death occurs, it becomes rapid and feeble. I can easily count a pulse of 140 but I have had cases of typhus in which the pulse could not be counted, though this was not entirely due to the rapidity but to the extremely low blood pressure so that the pulse was merely a wave instead of a distinct pulsation.

In emphasizing the close analogy to yellow fever, I neglected to state that in the case of typhus, there is an important difference: There is nothing to indicate that any period of incubation in the insect is necessary before it can transmit the disease. One important point in the control of the disease is that mere quarantine or isolation is of little value. Even if a house is emptied of all other inmates, the infected lice will persist in the premises almost indefinitely. Thus, thorough delousing of the patient, his associates and the premises is absolutely necessary. This may necessitate the removal of the patient to allow the delousing of the premises but, if lice are eradicated, no danger of transmission exists, whether the patient is treated on the same premises or elsewhere and isolation is not necessary.

One peculiarity of the Mexican body lice is that they are nearly black but this is probably due merely to the well established tendency of the insect to assume a color corresponding approximately to the complexion of the host. For example, in Mexico, I noticed a blond American whose lice were of the usual light color observed in the United States.

One physician, as a precaution against lice and other vermin, with no special reference to typhus danger, had a thick muslin suit made, with reinforcement of the openings after the manner of the tongues of shoes, using adhesive plaster to close the access at the wrists and ankles.

Intra-Ocular Foreign Bodies. Lapersonne, Le Prog. Med., Mch. 2, emphasizes the danger of unilateral or total blindness from even minute foreign bodies, the prophylactic value of masks and spectacles and the importance of early extraction after careful examination.

Simple Blood Transfusion. P. Ameuille, Le Prog. Med., Mch. 2, favors the method of Jeanbrau and Rosenthal. Blood is taken from a donor, from a vein, received into a flask containing sodium citrate and kept in readiness in the incubator, if necessary for several days. It is then injected into a vein.

The Cancer Menace and What To Do.*

J. H. CARSTENS, M. D., Detroit, Michigan.

Professor of Abdominal and Pelvic Surgery, Detroit College of Medicine and Surgery.

When we consider that one woman out of every eight dies of cancer, and one man out of every thirteen, the question looms up big to us, and it behooves us to do something to check this increase in cancer. In 1916 the death rate for cancer for every 100,000 population was eighty-one, making more than 80,000 for the whole country. Of course, tuberculosis has been decreased more than thirty per cent, but we know what causes tuberculosis, we do not know what causes cancer, and hence, we are very helpless. As Dr. Davis, Medical Director of the Amicable Life Insurance Company, Waco, Texas, says, "What are you doctors going to do about cancer? It is getting to be more and more prevalent, and is a disturbing problem for life insurance companies. Our losses are far greater than a generation ago. Can we keep any of those losses in our books by more thorough examinations?"

The Council of the Swiss Association for Combating Malignant Disease, asks for precise statistical and clinical information in regard to all fatal cases of cancer of the breast. Special notes are requested first of the influence of lactation, mastitis, or previous innocent tumors (fibroadenoma, cyst); on the developing of cancer growths; and, secondly, of the effect on prognosis of operation, roentgen rays or radium application.

Switzerland has, as well known, the highest cancer death rate in the world, although alone in the civilized countries, the rate is a diminishing one.

("Campaign notes of the Amer. Society for the Control of Cancer.")

Like all things, a cancer must have a beginning, one that is minute and cannot be seen. A cancerous growth gets to be the size of a millet seed, then that of a bean, then of a hickory nut, and thus continues to grow. When it is small no lymphatics are involved, and if we find it thus early and cut it out, the system is free of it, and continues so. Hence, at the present time the whole question of treatment resolves itself into that of early diagnosis; and the question of early diagnosis almost entirely depends upon the medical practitioner's **looking for the disease constantly.** I know that many people do not consult a physician, for they have no pain, and the disease is all too often far advanced before the doctor is consulted for these cases, and the profession cannot be blamed for those.

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*Read before the Wayne County Medical Society, April 1, 1918.

Every medical man must constantly have before his mind the possibility of cancer, and when that patient complains of soreness in the breasts, excessive flowing, or chronic irritation of the skin, **always think of cancer, cancer, cancer.** The greatest difficulty will be to educate the laity, and still, as it has been educated on the tuberculosis question, there should be no trouble to do the same thing with the cancer question, if only vigorous efforts are made.

I have advocated the creation of a certain day in the year to be called "Cancer Day," when every newspaper in the land should print an article on the subject, and every minister should preach from the pulpit on the cancer question, and every doctor should talk all that day wherever he goes on **cancer, cancer, and nothing but cancer.**

If every physician would thoroughly examine every case, he will be able to make a diagnosis early, when something can be done. If every woman with an excessive or an unusual vaginal discharge will be examined, if a little tissue be removed from the uterus which looks suspicious, and this be subjected to microscopic examination, many cases of cancer will be caught at the very beginning. And if every lump in the breast will be removed, every cyst, hardening or induration, or ulcer extirpated and subjected to a thorough pathologic examination, cancer will often thus be diagnosticated early. If every stomach or bowel trouble, instead of being allowed to drag along, would be subjected to a thorough investigation, if necessary even to an exploratory celiotomy, many more cancer cases would be recognized early.

When I say exploratory **celiotomy,** I do not mean that vicious exploratory operation that was recommended some years ago, of cutting into a tumor and removing a section, and then deciding whether it was malignant or not. This has been found the most vicious practice, as we get cancer implantation, and a rapid progress and spread of the disease. No tumor should be explored, it **should be removed with a large margin of tissue around it.** Great effort should be made **not to cut into the tumor,** or into any glands. After removal, an examination can be made microscopically, and the diagnosis made. This is especially applicable to tumors in the breast. Tumor in the breast requires complete removal of the breast with the glands; no chances should be taken. The only exceptions are those clear simple cases of fibroids found in young girls and young women, which can be removed under local anesthesia as a rule. In this connection, I might say that I am very much disgusted when I see a curetting done, or a lacerated cervix repaired, and the removed tissues thrown into a pail and not examined microscopically. I consider this **a most vicious practice.** I have repeatedly called attention to this fact in the past years, **that every curetting or tissue removed** from the cervix must be subjected to a microscopical examination, and cancer looked for. Ten years ago, I induced the State Board of Health to publish a cancer circular, after a great deal of trouble. This circular is still available, and should be made use of by the profession to distribute among the laity. **If we get the lay people to understand that an excessive flow, or irritating discharge, and a little enlargement or growth, or a continuous pain may mean cancer,** and that the medical man should be consulted early, much untold misery may be prevented and many lives prolonged. **It is carelessness that prevents the early recognition of this great scourge.**

Until we find the real cause or some specific cure, we are forced to preach the doctrine of early diagnosis and surgery, and in order to do that we must allow ourselves to be accused of having "cancer on the brain" by preaching, day in and day out, the story of cancer, cancer, cancer.

1447 David Whitney Building.

Intestinal Parasitism in Troops in Service. Vezeau of Lavergne, Le Prog. Med., Mch. 2, reports in 200 faecal examinations: no ova of ankylostomes; among 100 soldiers in the trenches, 73 carriers of trichocephalus, 7 of trichocephalus and ascaris, 8 of ascaris. Among men living in the sectors behind the trenches, in cantonments, 63% had trichocephalus, none ascaris. In the infected persons who showed no sign of disease, the trichocephalus ova varied from 1 or 2 to 5 in a preparation. Eosinophilia was never encountered in trichocephalus carriers, however great the number of parasites it was found in 4-9% of the carriers of ascaris. In 10 cases of diarrhoea without blood or fever, neither bacilli nor amoebae of dysentery were found but ova were numerous. In 8 of these cases, trichocephalus ova were numerous, 15-25 in a preparation. In 2 labeled "rebellious diarrhoea, colics" numerous ascaris ova were found. Thymol, calomel and santonin produced marked relief. In 14 cases of "febrile curve" ("fever undetermined in the U. S. military nomenclature") trichocephalus ova were found. Thymol relieved these.

Crime and the Human Family.*

By HENRY J. GIRVIN,

Chief, Buffalo Police Department, Buffalo, N. Y.

Crime may be defined as the breaking of laws promulgated by God approved and amplified by man.

The Bible tells us that Adam and Eve, tempted of the serpent, ate of the forbidden fruit. Today, under similar circumstances, Eve would be charged with petit larceny, and Adam with aiding and abetting the crime, both conditions being punishable by a fine or imprisonment; thus we find that crime had its inception with the advent of the human race.

If we believe in the laws of heredity, "that like begets like," and in that portion of the second commandment which says, "the sins of the father shall be visited upon the children unto the third and fourth generation," it is very evident that certain impressions of the mind are present at birth; in fact, they are evident long before reasoning power is established; we see them before the baby walks, talks or understands. They are evident, of course, in variable degrees in different individuals, but collectively speaking, it may be said that all children are born with such mental instincts as love, hatred, jealousy, dishonesty and lassitude; all these may lie dormant, or become intensified as development takes place.

In a recent publication a writer states, "We are all born with a crooked streak, and it is only a question of its proximity to the surface as to the amount of damage we do society." This may be considered a radical statement, but from 35 years of dealings with humanity in all its forms, I am most firmly convinced that the writer's opinion is well grounded.

Speaking anatomically, could a careful study be made today of Adam and Eve, but very little difference would be found as compared with the 20th century man or woman, except possibly as to size, form or shape.

But, although there may be no perceptible change evident to the naked eye, one organ has constantly undergone a change and that is the brain. It is to that portion of the human anatomy all our energies must be directed if we are to improve the condition of the human race.

The Declaration of Independence says, "All men are born equal." They are as far as liberty is concerned, providing they obey and respect the law, but as to their equality, as far as intellect is concerned, there is as much difference in the majority as there is between pine and ebony, although the latter are both wood. Too often humanity is judged by appearance, physical powers or weight. Without fear of successful contradiction it may be stated that at every turn we meet individuals who have the appearance of perfect health and sound intellect, but a brief conversation will show at once that their brain has never passed its childhood stage. The child who takes a penny is laughingly pronounced "clever" by his foolishly fond parents, repeats the trick, but this time he takes pennies and feeling secure in paternal approval, ever increases the amount until a thief is produced. They did not intend to be dishonest, but they planted the seed of a habit which grew on them until the prison doors closed for the protection of society. The same may be said of jealousy, lassitude and the like; from a small beginning, like the seed of the thistle, they grow and wax strong, and unless early uprooted, choke out and destroy all impulses for good, as the thistles choke out and destroy the tender grain.

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*An address delivered at a meeting of the Gross Medical Club, Silver Creek.

A well known authority has said, "Habits are automatic gratifications of mind impulses," in other words, the mind directs what the tongue, hands or feet carry out. It will be admitted that but one perfect man has ever lived, consequently we must not expect too much of the present or coming generation, yet we must strive to keep the human race in as nearly a perfect condition as possible, and to use all our energies for its betterment.

This one thing can be said with a reasonable assurance of reality, the first impressions are the ones that last; teaching should commence with the babe in the cradle.

Although there is no doubt in the minds of police officials who have made a study of crimes that the great majority of noted or habitual criminals are born such, education must not stop, for the saving of even one of these from a life of crime increases security in the mind of society and a saving of thousands of dollars to the taxpayers.

We must not lose sight of the fact that we belong to the animal kingdom; that we are only removed from the dumb brute in that we have the power of reason and can articulate. With this unquestionable truth ever before us, it is unreasonable to ask that we should be given the same chance that they are; that is, as to procreation.

After the child is born, discipline is paramount as to habit formation, especially so for those so prone to arise from the inherited instincts of a morbid mind.

It has been written, and President Wilson used practically these words in a recent speech, "To have people good, if it is necessary to do so, make them afraid of you." This may seem a harsh statement; other words might be used for fear, but to one whose duty it is to protect society from those who have formed deleterious habits, there can be no questioning of the necessity of the aforementioned statements.

A police officer's duty can be defined as; first, the protection of life and property; second, the prevention of crime; third, taking into custody people who have committed crime. Criminals fear three things, officers, publicity and the deprivation of freedom. A crime is never committed, unless by accident, in the presence of an officer, in fact, they avoid officers at all times; it is a true saying, "That a guilty conscience is its own accuser." The innocent and law abiding should have nothing to fear; the officer is their best friend, and he should always be considered as such.

May I give you an example of publicity? Since instituting at my headquarters in Buffalo, the screen, where every morning at 9 o'clock all criminals arrested during the previous 24 hours are shown under a strong electric light to our detectives, whom they cannot see, visits to our city by noted criminals have decreased fully 50 per cent, in fact, those who have never appeared on the screen would prefer 30 days in the penitentiary to another appearance there.

We all realize what deprivation of freedom means, especially when this may be for years, or for ones natural life. Many thousand men and women are detained in the penal institutions of this country, yet it can scarcely be said that crime is on the increase when we take into consideration the increase in population, and that every civilized country on the globe has representatives here.

As to treatment; many physicians advocate, and many operative measures have been taken for fractures of the skull, which are supposed to be the cause of a criminal career, but to my knowledge so far, they have been a failure. As yet no scientist has brought forward a serum; I know of no medicine for the purpose, may I therefore sum up the foregoing statements as follows:

In the procreation of the race we should be given the same chance as is our four-footed friends, especially of the higher order; mothers and fathers should look more closely into the life history of prospective son and daughter-in-laws; they should not stop at the immediate family, but as the late Henry Ward Beecher once said, "Go back to the grandparents."

Humanity is guided through these tortuous paths of life; first, by inherited instinct; second, the sphere in which we live. The first we find controlled by inherited conditions of the mind; the previously transmitted instincts which vary in form from trivial wrong-doing to the crime of murder; they are due to habit formation.

Second, the sphere in which we live, or environments; this is the most fertile field of habit formation.

It therefore behooves us as fathers, mothers and later, as teachers to use our very best endeavors to discipline the child against the formation of deleterious habits which are the ground work of practically all the crime committed today; such discipline should begin at the cradle.

I wish to take the liberty at this time to thank several members of the medical profession for the valuable aid given me in the sale of Liberty Bonds, War Savings Stamps, and protection of the public; Capt. Jacob Goldberg, Lieut. J. Henry Dowd, Sergeants Dewitt H. Sherman and J. F. Rice.

Headquarters of Police, Buffalo, N. Y.

New Poison Gas. Teulieres, Jour. de Med. de Bordeaux, Feb., calls this gas "sulfure d'ethyl bichlore," which we are unable to translate into chemical terms. Among 1500 men exposed, a third presented insignificant lesions and only 23 cases were serious, involving the eyes. In most cases, the phtophobia subsided in 4 or 5 days, cure being complete in 2-3 weeks, the lesion consisting merely of a rather severe conjunctivitis. In all; there were 3 ulcerations of the cornea and 1 panophthalmitis.

Chyluria. Loumeau, Jour. de Med. de Bordeaux, Feb., reports the case of a man 60 who had had chyluria since a gonorrhoea at the age of 27. Cystotomy revealed the presence of an intra-prostatic adenoma which was enucleated. Death followed and a partial necropsy revealed neither prevertebral adenopathies nor lymphangectases. A single previous examination had shown no filariae but, in view of the fact that the patient was a native of Mauritia, the chyluria was considered as probably of this nature. Renal symphysis with a single ureter was found to exist.

Intestinal Occlusion With Biliary Calculus. Villar, Jour. de Med. de Bordeaux, Feb., operated for intestinal obstruction 8 days after an attack of colic. A mass had been found behind the uterus, by rectal examination. A biliary calculus, the size of a hen's egg, weighing 95 grams, was found in the small intestine. Death ensued the next day. Begouin reported an identical case.

BUFFALO MEDICAL JOURNAL

A Monthly Review of Medicine and Surgery

EDITOR AND PUBLISHER, DR. A. L. BENEDICT, 228 Summer St., corner of Elmwood Ave., Buffalo, (Address for all communications. Please make personal and telephone calls before 1 P. M.)

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Water Filtration.

We are all familiar with the kind of economy that has old clothes dyed and repaired at considerable expense and that secures something better than the original but which soon proves unsatisfactory and does not postpone except temporarily, the expense of a brand new outfit. Buffalo did something of this sort a few years ago when the water intake was put upstream. It has required no strictly expert knowledge or experience to show that the tremendous expense has not resulted in complete success from the sanitary standpoint. Anyone with a very moderate knowledge of local hydrography and sanitary science knew in advance that certain advantages would be secured, that a higher average of "purity" would be secured, either in the macroscopic or bacteriologic sense, that depreciation in quality from shore and creek contamination would be less marked and less frequent. It not only could have been but it was predicted with certainty that these advantages could not postpone the ultimate problem of securing a really safe water supply by filtration beyond the time when a thorough understanding of sanitary matters had become so general as to affect popular sentiment.

The joint problem of insuring an adequate water supply for the future and against an accident that might occur at any time, may be conceded to have been solved but it could have been solved by a much cheaper and shorter tunnel. Neither has the establishment of the new intake in any way expedited the construction of a filtration plant nor materially affected the economy of operation of such a plant when established.

However, it is sometimes wise to make the best of a bad bargain. In view of the enormous expense involved in a filtration plant, especially when we consider the financial problems of the present and the immediate future due to war, and the possibility that some system of sewage disposal other than the convenient one of dumping it into the water supply of down-stream communities may be forced upon our attention, it may be wise to stop short of ideal conditions.

We trust that our readers will not accuse us of ignorance of well known sanitary dicta, therefore, in presenting certain practical facts and in suggesting some possible ways of avoiding a very serious financial burden in the near future. First of all, it must be admitted that, no matter what it cost and whether proper forethought was exercised or not, Buffalo has an adequate and excellent water supply for all non-potable purposes and even for drinking and domestic purposes if we set the calendar back a few years. Even if the city should increase enormously in population and in commercial demand for water, the present water supply is susceptible of large increase at a relatively small expense as compared with a complete change of supply, and any such increase in demand would probably require a separation of potable and non-potable systems if prohibitive expense is to be avoided.

It is by no means certain that sand filtration is the last word in water sanitation. Chlorination has been employed satisfactorily by many communities and is, indeed, in some cases, mainly relied upon as a safeguard against bacterial contamination, even when clarification of mud and sand filtration are jointly practiced. It has proved tolerably satisfactory for Buffalo, as a temporary expedient. Various other methods of purification, at present only of academic interest, may almost instantly be put upon an economic basis on a large scale. If, for example, as some optimists already feel confident, electric or some other form of power becomes greatly reduced in expense, almost any water supply that would flow through pipes could be rendered safe, even if not aesthetically desirable, either by transformation into heat or along various lines already demonstrated theoretically.

Some general method of guarding the existing water supply in Lake Erie may become necessary for the mutual protection of other communities than our own and even a local application of this principle at our own expense might prove to be cheaper than some of the more elaborate devices proposed, notably sand filtration. Self purification of water in large volume and of scarcely appreciable current as in the case of Lake Erie, "purifies itself," to use a somewhat old-fashioned sanitary term, within a comparatively few miles, largely by sedimentation and the action of harmless bacteria. Such means would not merely hold the sanitary problem stationary but would set it back, for practical purposes, to a period when the population of the water shed of the lake was comparatively sparse.

A very practical point to be considered is that Buffalo has, for some years, had a low typhoid rate notwithstanding the fact that fully half of the cases are introduced from without, either in the sense of being non-residents, or of having been contracted from extra-mural sources (vacational typhoid), or of being due to milk foods. When further allowance is made for infection by flies and dust into the outskirts of the city, for carriers and direct contact, the amount of typhoid that can be ascribed to our water supply or that could be ascribed to it even if chlorination were not practiced and if warnings to boil when the water becomes dangerous, were not published becomes very small though by no means negligible.

Furthermore, we must admit that the only water-borne disease that need be considered for practical purposes, is typhoid. Experience has accumulated to show that inoculation against this disease—as well as the paratyphoids—is almost if not quite as effective as against small pox though the test has not been intentionally carried on a large scale to the extent of deliberately exposing inoculated persons to highly contaminated water. But it is logical to ask whether routine inoculation, a comparatively cheap expedient would not obviate the necessity of elaborate treatment of water supplies especially as the protection would be general and not merely local.

For these several reasons, we believe that practical, if not theoretical wisdom points to a reasonable delay before adopting radical and enormously expensive methods in dealing with our water problem.

Post Bellum Problems.

One of the biggest problems that the profession will have to meet, after the war, will be the professional spirit of the returning surgeons. Something like a third of the total active practitioners then in civil life, will come back to pick up their old practices or develop new ones, even if the military surgeons are not increased beyond the limits of those already commissioned and the number recently called. This is a misstatement according to medical directories but we believe it to be true so far as the actually practicing profession is concerned. This is a big problem by itself, as already discussed in the previous issue but it is not nearly so big as that depending on the spirit of the men returning.

These men will have been accustomed to an entirely different kind of discipline from that prevailing in peace, to an entirely different deference to prestige. Many who could not have gained prominence in civil practice, possessed attributes which have led to rapid rise in the army, implying such control of a medical or surgical service as is gained very slowly in civil life and only by a very few. Those who have not been so fortunate will, never-the-less feel disposed to assume the same attitude on their discharge. In spite of all that has been said regarding the relative unimportance of professional work in the limited sense in the army, the great majority will have had practices at least equal to what men claim but seldom realize in civil life. Not only will these men have had a large and wide experience, extending into various specialties and without reference to war surgery itself, to conditions seldom encountered in private practice by any one man except a specialist or one known to have a peculiar interest in a rare condition, but they will have become expert in various diagnostic and therapeutic technics usually left in civil life to a comparatively small number. Perhaps the greatest distinguishing feature will be the habituation to very early and long hours, to rapid though careful work, to a large clientele which comes without effort and which is subject to almost perfect control.

Thus far in the country's participation in the war, the influence of the withdrawal of large numbers of practitioners, is difficult to judge. From some places, the expected report of a prosperous and busy profession, is verified; from others comes the report of a dull winter and spring in spite of the removal of competition. It is impossible as yet, perhaps for the duration of the war, to harmonize conflicting reports and to judge as to actual conditions. It is self-evident, that unless other factors have acted to reduce professional work for those staying at home, there must be an average greater demand for professional services than for many years previously. With the meeting of two bodies of medical men, both accustomed to larger practices than prevailed before the war, there is bound to be sharp competition, which can scarcely be relieved even by the retention of many in the government service. We are apt to forget that the withdrawal of physicians from private into public service, even in the gradual development of state and local departments of health and similar enterprises, implies also the withdrawal of clientele, either directly or indirectly, by the reduction of sickness.

We have no intention of suggesting in detail the proper solution of the problem stated. What the profession, in and out of military service should grasp in advance, is the broad principle on which the solution must depend. To fôresee the bald fact of competition is important in itself. Individually and as organized bodies, the profession must anticipate mutual competition in a broad and friendly spirit, both as to private practice and that in hospitals. The narrow, selfish scheming that has marred our past history must give place to a spirit of co-operation, fairness and generosity.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

Diseases of the Male Urethra Including Impotence and Sterility. By Irvin S. Koll, B. S., M. D., F. A. C. S. Professor of Genito-urinary Diseases, Post-Graduate Medical School and Hospital; Associate Genito-urinary Surgeon, Michael Reese Hospital, Chicago. Octavo of 151 pages, with 123 illustrations, several in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $3.00 net.

Fully one-half of this monograph is devoted to the consideration of gonorrhea, one of the most discussed of genito-urinary diseases, but which at the same time from a therapeutic standpoint has progressed the least. The author well expressed his attitude in the preface by saying,—"I realize full well my views are reacting and may not be shared by some of my colleagues." In spite of this the author has prepared a commendable work which will be of great value to the student and the practitioner because of clear, simple and concise treatment. The author carefully covers the anatomy, the symptomatology, the complications on impotence and on sterility with their causation and treatment.

The reviewer realizes that unfortunately the author has not added anything which might prove useful in the treatment of gonorrhea. His treatise is well done, enhanced by many carefully prepared illustrations descriptive of the condition that gives definite pictures to the man who is in a hurry and needs to know quickly what to do.

The Seriousness of Venereal Disease. By Sprague Carleton, M. D., F. A. C. S. Illustrated, New York, Paul Hoeber, 1918. Pp. 67. Price, $.50.

The attempt of the author at this time of social disturbance due to war conditions, is laudable. Very little is said; the volume is simply an exhibit of pictures of syphilis, chancroid, bubo, etc., with a very short descriptive report of the case and the medical and moral lesson to be drawn therefrom; just enough to hold the attention of the soldier and give him some idea of the disease. The photographs represent the diseases as they are without exaggeration; if anything they underestimate the seriousness of the disease as many of the pictures lack illuminating detail. The reviewer is of the opinion that in a book ostensibly written for the soldier it would have been better to have made the announcement of its specific purpose. The author's effort is worth the while and while not remarkable, it will serve a useful purpose in enlightening those ignorant of the havoc of venereal diseases.

Clinical Diagnosis. A Manual of Laboratory Methods. By James Campbell Todd, M. D., Professor of Pathology, University of Colorado. Fourth edition, revised and reset. 12mo of 687 pages with 232 text-illustrations and 12 colored plates. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, 14s. net.

That the fourth edition of Todd's popular book is received so soon after the publication of the third edition is the very strongest commendation of its usefulness to the profession. The book has been somewhat extended in scope and matter and the size in consequence has been increased. His position as a teacher, well fits the author to present his subject in a rational and practical way with enough detail to make the tests easily carried out by the student and general practitioner for whom the work primarily was prepared.

The laboratory methods especially considered are those that have a clinical value. As it is not designed for the trained laboratory worker, the methods offered are simple and practical, emphasis being placed as far as possible on those requiring little complicated apparatus. The quantity and quality of the new material added is of special interest and brings up to the minute laboratory diagnostic technique useful to and available for the general practitioner. The changes and additions are widely scattered throughout the book. They include the use of colorimeters; the spectroscope; methods of matching blood for transfusion; the new Bass and Johns concentration methods for malarial parasites; the fractional method of gastric analysis; vital blood staining; the Wilber and Addis method for urobilin in the diagnosis of pernicious anemia; and, the estimation of amylase in urine and feces in pancreatic diseases.

The illustrations have been materially increased; the black and white pictures have received special consideration with the elimination of the poor in former editions and the addition of at least 90 new ones. These changes and additions give accurate pictures of microscopic structures thus making interpretation easy and giving information that can easily be remembered.

The book is fully entitled to the flattering reception accorded previous editions.

CORRESPONDENCE

This department is intended for the presentation of news and views not coming within the scope of other departments, and particularly to afford opportunity for discussion and criticism of views elsewhere expressed.

117 West 76th Street, New York, Aug. 12, 1918.

Editor Buffalo Medical Journal:—

The new New York State Law to which you call attention in your August issue by which only licensed physicians may treat or prescribe for venereal diseases is in this respect a work of supererogation. It is another proof of the truth of which Ex. Chief Justice Cullen said of the statutes of this state, that "they are the greatest mass of legislative nonsense in existence." This law confers nothing on the physician which he did not already possess. To understand its true import the clause relating to the penalties inflicted upon druggists under its provisions for giving a copy of or renewing a prescription containing a remedy for venereal disease must be considered. In time this clause will be proved to be as unconstitutional as certain clauses of the Harrison law have just been proved to be. Meanwhile it advances the propaganda for the socialization of medicine as far as it relates to the monopoly by the state at the expense of the taxpayers of the treatment of venereal diseases. It is about time that the doctors woke up to the political activities of the state medical authorities at the expense of the profession.

JOHN P. DAVIN, M. D.

TOPICS OF PUBLIC INTEREST

British Suicides. The male rate has declined from 157 per million population for the decade ending in 1910, to 151 in 1914, 105 in 1915, rising to 111 in 1916. The female rates were: 47, 45, 45, and 38 respectively. Increased employment and better wages are credited with the improvement.

Incomes. For 1916, 206 persons reported incomes of a million or more; 376 between half and one million; 6,051 between 100,000 and half a million; 115,061 between 10,000 and 100,000; 150,553, 5-10,000; 72,027, 4-5,000; 85,123, 3-4,000. According to average families, it thus appears that rather less than 2% (437,936) have incomes of $3,000 and over. Substantial increases in the numbers for each grade are reported, though this is probably due partly to greater realization of the necessity of being honest.

Automobiles. In spite of the war, the registration of automobiles continues to increase. 422,853 have been licensed up to July 1, in the state, against 349,040 last year. Passenger autos increased from 291,115 to 335,245. The estimated receipts from the license tax are 5 million dollars, enough to build about 200 miles of cement road. Motorcycles show a slight decrease.

Guarantee for Buffalo General Hospital. Owing to increased expenses, the directors have circulated guarantee blanks each covering a proportionate share of whatever deficit may occur, the liability of each share being limited to $25. Any subscriber may subscribe for as many shares as he pleases.

Commissions for Nurses. The Canadian Army Medical Corps will commission nurses as lieutenants. They will wear the rank insignia and give and receive salutes accordingly. It may be said that, while American nurses do not hold military rank, many officers and soldiers accord them the courtesy of a military salute.

Donors and Receptors in Blood Groups. An abstract previously published, omitted the diagram mentioned. A still simpler way to remember the dangers of agglutination is this: Any group may be its own donor and receptor. Donation should otherwise be from a higher to a lower number and in any possible combination of numbered groups except that there is a mutual agglutination between 2 and 3. Thus

Group 1 is the universal receptor, Group 4 the universal donor.

Child Welfare Work in Buffalo. The common council has appropriated $15,000 for equipment of nutrition clinics, care of mothers and babies, education of parents and children and prevention of still births.

Trudeau Memorial. A statue donated by former patients was unveiled at the Trudeau (formerly Adirondack Cottage) Sanatorium, Aug. 10.

The American Dental Assn. met in Chicago early in August. 6000 members were in attendance. The meeting was devoted largely to the consideration of military dentistry and dental hygiene.

Rejections of Drafted Men. 1896 of 14,870 accepted by local boards of New England, were rejected after reaching camps—12.7%.

Aviation Mortality. From Sept. 1 to July 20, 155 deaths occurred in training fields. It is calculated that there are a trifle over three deaths for every 10,000 hours of flight.

The Preparedness League of American Dentists, an organization of 15,000 dentists which was formed by Dr. J. W. Beach of Buffalo, has already given free aid to one half million men, to fit them for military service. According to the present law, only one dentist is allotted to every 1,000 men. Statistics from the front show that 20% of the men in the sick wards are there because of diseases arising from infection from diseased teeth.

Col. Herbert A. Bruce of Toronto says that the physicians have stamped out typhus and typhoid fever in the Allied Armies. That only 27 cases of typhoid fever in an army of two million men were left. He asks why women are not eligible to the Medical Reserve Corps. He said that he had been instrumental in having them admitted to the Medical Service in Great Britain.

Military Casualties. At Gettysburg, the two armies numbered together about 150,000, the Union losses being 23,190 and the Confederate 36,000, a total of nearly 60,000, 40% for three days' open fighting. Casualties of 25-30% (killed, wounded, and missing) were frequent for individual units for various 2-day conflicts of the Civil War. Of course, these percentages do not apply to the aggregate of forces including reserves, except for a few battles of unusual severity and in which practically all troops were engaged. It will be interesting to compare statistics of the present war, in which there has been no single day without casualties due to combat and in which no contest termed a battle has been of less than a week's duration, whereas very few battles of previous wars of our own country exceeded two days and none except sieges, three days, if we are not mistaken.

The U. S. Public Health Service (formerly called Marine Service and organized as a branch of the Treasury Dept. to look after the merchant marine) has for some time since the declaration of war been operated practically as a branch of the Bureau of Medicine and Surgery of the Navy. It is expected that a bill will be introduced in Congress to combine it permanently with the Naval Medical Dept. For many years, the officers have been graded and paid corresponding to the army and navy Medical officers and, more recently, have worn insignia of rank.

Surgeon Probationers in the British Navy. At the outbreak of the war, senior students of medicine were allowed to complete their course. The gradually increasing need of medical assistants has led to the enrollment of junior students in the capacity mentioned, with assignment to the navy, their duties being those of assistants and to care for minor casualties.

Venereal Disease in the American Expeditionary Forces. This has been reduced by measures already mentioned, to 47.8:1000, as against a record of about 91 in the regular army before the war and somewhat lower in troops in cantonments during the war, after the elimination of the pre-enlistment incidence. As has already been remarked, the bogy of the military venereal disease menace, about which so much was written, has proved imaginary. Rather has it been proved that the real venereal menace was one of civilian life. But, not to foster an undue degree of optimism, it should be frankly stated that the low venereal incidence of soldiers is largely due to the fact that they have too little liberty and are too tired to contract venereal disease. Army coffee may be another negative fact for, as George M. Gould pointed out several years ago, the average man uses coffee and tobacco as antidotes to each other. The soldier continues to use tobacco, he drinks extremely weak coffee whose flavor does not conduce to compensation of caffeine by increased volume of consumption. There is a quite unfounded belief among many soldiers that the coffee is doped with potassium nitrate to act as an anaphrodisiac.

Gas Infection. About 70% of gas infection is due to the Welch bacillus, at least two other bacteria being concerned in the remainder. It involves muscles especially and is predisposed to by acidosis, hence by fatigue. Intravenous or other introduction of alkalies is theoretically indicated and there is some practical corroboration of the theory.

Tetanus Antitoxin has, for some time, been used by the Germans in the form of a powder, applied on cotton to the wound. The liquid preparations have also been reduced in volume.

Disinfection of Wounds by Gases, in regard to which we have published several abstracts, is generally regarded unfavorably by military authorities.

Malaria. The weight of evidence is that the human being is the essential host and that the disease is carried over from one season to another by uncured cases. Thus efficient treatment, mainly by quinine, is not merely a matter of personal therapeutics but of state sanitation. Fifteen years ago, our Associate Editor, Prof. Pel of Amsterdam, stated that while the anopheles was common in Holland, malaria had become a rare disease owing to the thorough treatment of existing cases by quinine.

Mosquito-Born Diseases. Four have been absolutely demonstrated: Malaria (three types), Yellow fever, Dengue, Filariasis. Various other infections have been pretty well demonstrated to be at least occasionally conveyed by mosquitoes, not to mention infections carried by other insects either adventitiously or obligately.

German Man Power. Statistics of deaths and prisoners, said to have been issued by the German government are as follows: 1914, Western Front, 669,800; Eastern Front, 163,900 (5 months). 1915, W. F., 713,461; E. F., 699,600. 1916, W. F., 901,250; E. F., 359,800. 1917, W. F., 320,450; E. F., 261,250 (5 months). Total 4,089,511. These numbers probably represent definitive losses (including permanently disabled). The more intense fighting of the present year is estimated at a million casualties, at least of which, on an average military experience, 40% would be definitive. Checked by number of divisions, comparative losses of British with an army of 2 million and allowing for the temporary disability of those who would untimately be returned to the ranks, it may be held that the total potential militia of Germany is the original total of 10% of the population plus—7 million, less 5 million, equalling 2 million. The actual present estimate is 3 million but this is substantially in agreement as the two advanced yearly classes, numbering net about half a million each, have been called into service and prisoners of the 1920 class comprise almost exactly 1/7 of all prisoners corresponding to a total strength of 3,500,000 or 2,500,000 of the normal age. From this must be deducted the losses of the last two weeks or so, so that the actual discrepancy is slight. Austria, on the same proportionate basis would have had an initial militia of 5,500,000 and a remainder of about 1,500,000. The estimate on a divisional basis was less than this at the beginning of the year and is just about a million at present. Allowing for the greater number of deaths from disease and disaffection and even defection, this estimate is reasonable in comparison with that of Germany.

Gigantism. Joseph Yawniuck died July 23, in Camden, N. J., aged 19. He was 7 feet 10 inches tall. Death was ascribed to the pituitary disease.

The N. Y. Military Census of males between 16 and 50, was 2,914,909, out of a total population of about 11 million.

New Source of Alcohol. The sotol plant which grows wild in Mexico is said to be available on a practical scale.

Mobilization of the Entire Medical Profession. We have been unable to learn the details of the proposed government measure to constitute the entire profession as a reserve medical reserve. There is no question either as to the necessity or the right of the federal government to take such action as a war measure, nor as to the general willingness of the profession to accept such regulations as may be imposed. Probably the principal duties required will be examination of recruits and an occasional compulsory change of residence to insure adequate medical attention to communities without a physician. It is possible that the plan as finally evolved may go some distance along the way of socialization of medical service but, so far as may be judged from the conduct of the railroads, it is unlikely that any radical permanent interference with private enterprise is contemplated. Now is the time for the presentation of the views of physicians themselves. Later even well meant constructive criticism must yield to obedience to orders.

French Statistics of Medical Education. From 1914 to 1917, the number of male students was, respectively 10,045, 2,944, 3,263, 3,375. Female students, 1,088, 772, 765, 822. Foreign students, 1,421, 625, 539, 515.

Food Prospects. This year's wheat crop for the U. S. will amount to nearly a billion bushels. Allowing for the proportion of the population at early and late ages, this corresponds to nearly double the total food requirements of the whole country, including the army and navy, for a year. As other cereals are also abundant, corn especially, and of nearly equal food value, and as cereals need not comprise more than half of the entire ration, we can spare enough to afford an ample cereal ration for the entire military and civil population of all of our allies whose countries are active belligerents. The abundant apple crop prophecied, though not of so great apparent importance, is also a very practical hygienic help, especially as there was a scarcity of fruits last year. The scarcity of sugar seems inevitable, though not of serious degree. Some general plan should, however, be immediately worked out, to insure the preservation of various fruits for which the addition of sugar is usually held by housewives to be essential. These fruits should be preserved anyhow, in anticipation of an available sugar supply or for use without sugar if necessary.

Drugs in the Army. Practically every state of the Union has a law which provides that those who furnish drugs to the public shall be qualified for this professional work. In our Army the hospital steward who dispenses the medicines ordered by the physician for the sick soldier is detailed from the ranks without requirement of pharmaceutical training.

To remedy this defect and thus increase the efficiency of the Medical Department of the Army, it is proposed to establish a Pharmaceutical Corps, which will be under the command of the Surgeon-General of the Army.

A bill has been introduced to provide a Pharmaceutical Corps in that department. It provides for the establishment of a Pharmaceutical Corps to be composed of a pharmacist director, with rank of major, five deputy pharmacist directors, with the rank of captain, and such number of pharmacists, with rank of lieutenant, and of pharmacist apprentices, as may be needed for the service. The bill delegates to the Pharmaceutical Corps the following duties: To procure by purchase or manufacture all supplies of medicines, drugs, chemicals, pharmaceutical apparatus, and hospital and surgical dressings necessary for the Medical Department of the Army; to determine the quality and purity of such supplies; to have charge of the medical supply depots of the Army and the storage and safeguarding of such supplies; to provide for the issuance and distribution of such supplies and the dispensing of medicines in the various hospitals, dispensaries, infirmaries, trains and camps of the Army; to properly care for, regulate the dispensing, and to systematically account for all spirituous liquors and habit-forming drugs purchased for the department; to procure by purchase or manufacture such drugs, chemicals, reagents, tests, and biologic products as are used in the laboratories and the medical and surgical practice of the department for the purpose of diagnosis, prophylaxis, or treatment; to account for all moneys received from sales of medical supplies, in accordance with the provisions of the Army regulations or disposed of by order of competent authority; to inspect the department's stores and supplies of drugs, medicines, hospital dressings, reagents, tests and biologic products and determine their deterioration and fitness for use; to co-operate with the other branches of the department in rendering first aid and wound dressing and in the making of diagnostic and chemical tests; to establish and maintain a systematic course of study and training, including the advances made in medicine, pharmacy, and sciences allied thereto, to be pursued by the members of the Army Pharmaceutical Corps who are seeking promotion in the Corps.

The Public Health Service will vaccinate against smallpox or typhoid fever, any persons, free of cost, who will call at any one of the service stations.

Two Aluminum Identification Tags, each the size of a silver half-dollar and of suitable thickness, will be worn by each officer and soldier of the American Expeditionary Forces and by all civilians attached thereto. These tags will be worn suspended from the neck, underneath the clothing, by a cord or thong passed through a small hole in the tag, the second tag to be suspended from the first one by a short piece of string or tape.

In the case of officers the tags will be stamped with the name, rank; regiment, corps, or department of the wearer and the letters "U. S." either in such form as "U. S. Infantry," "U. S. Air Service," "U. S. Tank Corps," or simply the letters "U. S. A." when an officer is not a member of an organization, corps, or department.

In the case of soldiers, the tags will be stamped with the soldier's name and the letters "U. S. A." on one side and his Army serial number on the other side. The stamping on tags previously issued will be altered as practicable to conform with this order.

This is an added means of identification.

Membership in Army Medical Reserve Corps, Naval Reserve Force, or Volunteer Medical Service Corps is Urged Upon All physicians, including women. (What provision has the government made in regard to commissions for women physicians? This is a timely question, as many women doctors would volunteer eagerly, if assured of the same standing as their men colleagues. Ed.)

Every Officer, non-commissioned officer and private will receive full pay during the period he is held as a prisoner in an alien land.

The Surgeon-General has announced that no member of the military service disabled in line of duty, even though not expected to return to duty, will be discharged from service until he shall have attained complete recovery or as complete recovery as may be expected when the nature of his disability is considered. In furtherance of this policy, physical reconstruction is defined as complete mental and surgical treatment carried to the point of maximum functional restoration, both mental and physical. To secure this result all methods recognized by modern medicine as conductive to cure will be utilized. In other words, not only the ordinary means of medicine and surgery, including all specialties, will be utilized, but also physical measures such as are employed under physiotherapy, including hydro, electro, and mechanotherapy, active exercises, indoor and outdoor games, and passive exercise in the form of massage. Provision in the form of adequate buildings and equipment for physiotherapy have been adopted in each of the hospitals.

Dr. Franklin Martin urges that physicians ineligible to the Medical Reserve Unit join the Volunteer Medical Service Corps. An insignia has been adopted for it. It is an open work shield with the caduceus and wings, surmounted by the letters V. M. S. C. This corps is not authorized to give rank. Arrangements shall be made between a member and the agency requesting service. The question of compensation and place of service, whether with or without rank, must be determined at that time. For further information, write to the Medical Section, Council of National Defense.

The First Report of the comparative cost of the operation and maintenance of the Air Mail Service shows that the airplanes used in this service have broken all records for economy of gas consumption.

The total of all operating expenses of nine airplanes covering flights aggregating 7,234 miles, was $3,682. The total consumption of gas representing 113 hours and 8 minutes of flying was 1.377 gallons, which is $32.50 per hour—something over 50 cents per mile. The total cost of gas was $405 in flying 7,234 miles.

A Six Months' Supply of bacilli Welchi serum for the cure and prevention of the deadly gaseous gangrene, or malignant gaseous edema, amounting to 120,000 doses, has been ordered by the American Red Cross in this country for shipment to the Red Cross Commission in France. The serum is a development of the last year or so and the supply is limited.

The bacilli Welchi, a small, spore-bearing germ which is the cause of gaseous gangrene, was discovered by Dr. W. H. Welch, of Johns Hopkins University, a member of the medical advisory committee of the American Red Cross, in 1892. The disease in question develops within a few hours of the time when the wound is received and, if left to itself, invariably proves fatal. Its duration is from 12 hours to 4 days. From careful anatomical studies it has been demonstrated that the disease develops only in wounds involving muscle tissue.

It is used and is in its effect the same as the antitoxin of diphtheria in the present-day treatment of the latter disease.

Uniform Standards of physical examination governing the entrance to all branches of the armies of the United States for the use of all medical officers of the Medical Department of the Army and of local and medical advisory boards under the selective service regulations have been printed and mailed.

Adherence to the new rules and regulations by the local boards will, it is expected, result in uniform examinations in all parts of the country and should prevent men physically disqualified for military service from being sent to camps. At the same time the new standards will enable local physicians to make examinations with a better understanding of the needs of the Army and will clear away misconceptions and misunderstandings which will result in the sending of men to camps who heretofore were rejected.

On Representation of responsible heads of the Red Cross, Y. M. C. A., and other allied bodies who are doing war work in France that they are unable to obtain a sufficient number of women as workers, the prohibition by the War Department, concerning the granting of passports to relatives of officers and men in the United States Army, is modified so as to permit the use of sisters of soldiers as workers under the following conditions:

First. The sisters must be duly accredited members of one of the regular authorized organizations.

Second. Each must be particularly qualified by training for the position she is to fill.

Third. That she is sent to France as a worker and not as a relative.

Fourth. That she will make no efforts to visit her relative in France, whether sick or well.

Fifth. That the organization to which she belongs will make itself responsible for returning her to America in case she violates these rules.

Sixth. That if she marries an officer or a soldier in the American Expeditionary Forces after her arrival she will automatically be sent back to the United States by the organization in which she is serving.

To Safeguard the Health of American Soldiers on the transports going to France, strict medical and sanitary precautions are taken.

Before embarking a thorough examination of troops is made by Army medical officers to eliminate the sick. Within five days of sailing the commanding officer of troops submits to the senior naval surgeon a statement that all his men have received protective vaccinations; and if any have not, he designates the men to be vaccinated.

After embarkation all troops must spend at least an hour and a half daily on deck, each man bringing his blankets to be aired. Commanding officers must see to it that their men receive 30 minutes of physical exercise during this period. The men are expected to stay in the open as much as the weather will permit.

All men and their effects must be inspected twice weekly by medical and commanding officers to detect the sick and make sure that the men are observing the rules of hygiene. The men sleep "head and points" to prevent, as far as possible, the spread of infection by coughing. The officers are instructed to see that the men sleep with proper coverings and that they do not sleep on deck or elsewhere unless properly protected.

Men are not permitted to close the ventilators or otherwise interfere with the flow of air. They are not permitted to eat food in berth spaces. Food is not served in rooms or other unauthorized places unless so ordered by the senior naval surgeon in case of sickness. Guards are stationed day and night at drinking fountains and other points to enforce cleanliness.

Spitting on deck is strictly forbidden. Every man must take a shower bath daily and change his underclothing at least once during the voyage.

Electrical Compass. After more than 30 years' experimenting a New Jersey physician has perfected an electrical ship's compass which records on paper all the courses taken by a vessel during a cruise of any duration.

Wassermann Reaction. H. J. Corper, of Chicago, publishes in the American Review of Tuberculosis, for July, the results of Wassermann reactions with over 2,500 sera of tuberculous patients. He reviews the more recent literature dealing with the Wassermann reaction among different groups of people, including the tuberculous. He himself reports that among 1,395 men and 1,399 women residents of the city of Chicago Municipal Tuberculosis Sanatorium, a definite positive Wassermann reaction was obtained in 7.2% of the men and 15.8% of the women.

The incidence of a definite positive Wassermann reaction as far as this could be determined, did not reveal any striking differences from the above figures resulting from a classification of the cases according to different ages or different nationality, or race.

Anticigarette Reformers would get scant consideration from the medical corps of the United States army, according to major surgeons stationed in hospitals along the front, some of whom say that the cigarette produces a relaxation for the wounded and the men just out of the trenches that no medicine could possibly produce.

"I have seen men borne in on stretchers or staggering in on their feet, with their faces contorted showing either physical pain or mental strain from their grim experiences in the trenches, relax, smile and ask for something to eat, after having a whiff of a cigarette," said a surgeon in charge of a casualty clearing station.

."The effect of the cigarette is wonderful. It certainly is not medicinal, for the action is too quick. As soon as the lads take their first whiff they seem eased and relieved of their agony."

Bruck Test. H. J. Corper and L. Fiala, of Chicago, report in the July number of the American Review of Tuberculosis, on the serochemical reaction of Bruck, which they tried on 228 sera in a tuberculosis sanatorium. They found this reaction for syphilis unreliable as a test to supplement the Wassermann reaction in the tuberculosis sanatorium. Of 14 Wassermann reacting sera six gave a negative serochemical reaction. Of 213 negative Wassermann reaction sera, 113 gave a positive Bruck test. The percentage of positive was greater among the moderately advanced and far advanced cases of tuberculosis than among other classes of tuberculosis cases and of non-tuberculous cases.

Centenarian. Rev. Albert Vogel of Jeannette, Pa., a native of Bavaria, who came to this country in 1829, and who served in the Civil War, is still active and said to have the appearance of a man of 60 at the age of 101. He has been and still is preaching, for a period of 85 years. He had 11 children of whom 6 survive; 17 grandchildren, 34 great-grandchildren, 3 great great-grandchildren. John Dempsey of Marion, Ill., died in June 3 days before his 100th birthday. He had been married 13 times, the last time 5 years ago. Wm. Masios, a negro preacher, died at the Bellevue Hospital, N. Y. City, Aug. 15, claiming to have been born in Richmond, Vt., in 1771. His answers to questions as to the times in which he lived were so intelligent as to support his claim. The Medical Review of Reviews, July, mentions a Mrs. Gold of Brooklyn as living at 102, able to do her own washing and presumably other forms of housework. She has 2 children, 14 grandchildren and 8 great-grandchildren.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Franklin W. Barrows of the Buffalo Health Dept. has been appointed Assitant State Medical Inspector of Schools, in the State Dept. of Education and will reside in Albany.

Dr. M. M. Cole, attending physician to the Niagara County

Infirmary at Lockport, has resigned to accept the position of Assistant Physician at the Soldiers' Home, Bath.

Dr. Franklin C. Gram, Acting Health Commissioner of Buffalo, celebrated a quarter of a century of service with the Health Dept., Aug. 7.

Dr. Frederick Hayes motored through the Adirondacks in August.

Dr. Floyd S. Crego has returned from Keuka Lake.

Dr. George Gorrill has been appointed superintendent of the Buffalo State Hospital, succeeding Dr. Arthur W. Hurd, who resigned on March 18th. Dr. Gorrill's appointment is announced by the state civil service commission and he is now in charge of the Forest Avenue hospital for the insane. The new superintendent has been a resident physician of the institution for seventeen years. For the last seven years he has been first assistant to the superintendent and since the resignation of Dr. Hurd has been in charge of the hospital. Dr. Hurd left the hospital soon after presenting his resignation.

Dr. Edward H. Mehl announces the removal of his office to 127 Allen St. Practice confined to diseases of the ear, nose and throat.

MILITARY PERSONALS

Major Marshal Clinton, Buffalo surgeon, who has been attached to base hospital No. 23, near the French front, has just been promoted to be lieutenant. It is understood the Buffalo officer has been detached from base hospital service and is now on duty just behind the first line trenches.

Dr. Marshall L. Hillsman of Little Valley, who enlisted in the medical department, has received a commission as first lieutenant and will leave for Oglethorpe, Ga., on August 13th.

To Camp Crane, Lieut. Roy Marshall, Rome.

To Camp Gordon, Capt. Herbert Sperry, Rochester; Lieut. Arthur Glover, Buffalo.

To Camp Grant, Lieut. Wm. McCanty, Buffalo.

To Camp Jackson, Lieut. James Short, Buffalo.

To Camp Logan, Lieut. Abraham Lebendig, Rochester.

To Camp McArthur, Lieut. Floyd Breese, Elmira.

To Camp Sevier, Capt. Wm. Reid, Rome.

To Fort Des Moines, Lieut. Harry Wronker, Rochester.

To Fort Oglethorpe, Capt. Francis O'Brien, Auburn; Lieuts. Raymond Laport, Buffalo; Halley Hammond, Franklinville; Clarence Fessenden, Fulton; Frankling Knope, Rochester.

To Gas Defense Plant, Long Island City, Capt. A. L. Benedict, Buffalo.

To Mineola, Capts. Edwin Ingersoll, Rochester; Samuel Munford, Ithaca.

To New York City, Lieuts. Elmer Clarke, Buffalo; Chas. Steinhauser, Rochester.

To Camp Jackson, Lieut. Edward Frost, Buffalo.

To Camp Wheeler, Lieut. Carl Zimmerman, Elmira.

To New Haven, Capt. Frederick Bowen, Mt. Morris.

To Williamsbridge, Capt. Norris Orchard, Rochester.

To Camp Shelby, Lieut. Henry Spofford, Batavia.

To Camp Zachery Taylor, Lieut. Chas. Maggie, Rochester.

To Fort Oglethorpe, Ga., Lieuts. Harry Scott, Batavia; Lyman Lewis, Belmont; Howard Hoehman, Vincent Moscatee, Buffalo; Wm. Jones, Jamestown; Kenneth Smith, Edward Twist, Lackawanna; Edward Amsler, Norman Pfaff, Rochester; Jacob Dewees, Buffalo; Geo. Peddle, Perry.

To Rochester Institute, Lieut. Joseph Laduca, Buffalo; Capt. Francis Goldsborough, Buffalo; Lieuts. Geo. Davis, Arcade; Harold Patterson, Buffalo; Louis Preston, Canisteo; Capt. Wm. Thomson, Warsaw and later to Base Hospital, Camp Sheridan, Ala.

To Camp Reed General Hospital, Capt. Herman Raymond, Collins; Lieut. Frank Walz, Buffalo.

To Camp Devens, Lieut. Melen, Rochester.

To Camp Dix, Lieut. Francis Kujawa, Buffalo.

To Camp Hancock, Capt. Gordon Priestman, Willard.

To Camp Lee, Lieut. Clayton Axtell, Deposit.

To Camp Upton, Lieut. Jeremiah Morin, Rochester.

To Columbus Barracks, Lieut. Rollin Hadley, Collins.

To Fort Des Moines, Major Martin Tinker, Ithaca.

To Richmond, Va., Capt. Gordon Graham, Rochester.

Major G. M. Davis, who practiced in Welland and volunteered for service in the Canadian Army at the beginning of the war, is believed to have been drowned when the hospital ship Landovery Castle, was torpedoed.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Nelson C. Holt died in Webster July 8, age 65. He graduated from the Bellevue Hospital Medical College in 1896. He was formerly financial secretary of the Rockefeller Institute for Medical Research.

Dr. Henry Neville died at his home in Jamestown July 16, age 78. He graduated from the Homeopathic Hospital College of Cleveland in 1872.

Dr. Joseph Clark, Olean, died July 22 in Buffalo, age 69. He graduated from the New York University in 1885.

Captain Paul Betowski was killed in France on July 2nd: He volunteered to take an automobile full of gas masks to a point on the firing line where there was urgent need. What happened to him is not known but he never returned alive. He had been the assistant surgeon at the Soldiers' Home at Bath for several years. He was born in Waverly 24 years ago.

Dr. George Edward Fell, Buffalo, 18.., died in Chicago.... of paralysis, having been in bad health for several years. He was born in Chippewa, Ont., July 10, 1849. He was an engineer before becoming a physician. His life work may be summed up as follows:

Placed first crib of great Buffalo Breakwater June 8th, 1869. See Discussion, Trans. Am. Socy. Civil Engrs. Vol LII, p. 73, 1904.

Member 1st American Microscopical Congress, August, 1878, Indianapolis. Organizer of Am. Socy. Microscopists, at this Congress.

Elected first Treasurer and Custodian, Am. Socy. Microscopists, at the first meeting, Buffalo, N. Y., August, 1879. Held office 9 years.

Assisted in triangulation of floats for course and speed in location of draw-pier of International Bridge, as Asst. U. S. Engineer. 1879.

First Thesis on Histological Subject in Med. Dept. University of Buffalo, graduated with highest honors, Feby. 1882. Subject—"Histology of Aneurismal Clots."

Elected to the Chair of "Physiology and Microscopy," Med. Dept. Niagara University, held the office for about ten years. 1884.

First Discovered, after about 400 years of futile investigation of the ablest surgeons of previous history, the great value of mechanical respiration in saving human life in cases of asphyxia. He not only discovered but demonstrated by the most convincing cases the absolute advantage over the postural methods. The method has been in practical use since the date of the discovery in 1887. In many medical publications his work has been highly lauded by most noted members of the profession. He gave his discovery to the cause of humanity and has made nothing from his work.

First designer of a simple and practical steamboat pipe driver for making observation of the bottom of the lake at Buffalo and Cleveland Harbors, which did splendid service and repaid the U. S. Government many fold for its outlay. This was about 1883-1884. The apparatus was utilized for foundation purposes for the Buffalo Breakwater harbor construction.

Demonstrated in 1903 the mistake of building the seven million dollar plan of the present system of Water Works at Buffalo, N. Y.

Original observations of the Currents at the easterly end of Lake Erie and head of Niagara River demonstrated the truth of his statements and have all been upheld by later work of engineers employed by the Buffalo Chamber of Commerce, and later investigations which also proves the statements that Dr. Fell contended for in the face of great opposition. Opposing his enquiry were the State Commissioners of Health of the State of New York; the Health Commission of the City of Buffalo and nine-tenths or more of the physicians of Buffalo. See his publication, Journal Am. Med. Assn., Sept 3rd, 1910.

First used the face mask in mechanical respiration, thus doing away to a great extent with the necessity of tracheotomy. 1888-89.

The first to invent a simple, inexpensive, practical submarine life preserver using a face mask applied so as to be both air and watertight, this connected by a strong rubber or metal tube, to an upright, weighted air supply which extends well above the water and waves, and from which air is continuously supplied to the wearer of the mask. It has been proven successful and will accomplish much good. It may be used by both sexes and is simple in its application.

"Electrocution," which was first suggested by Dr. A. P. Southwick of Buffalo, N. Y., was made practical by the investigative work of Dr. Fell. He made the vivisection experiments which resulted in his conclusion, "First—That death produced by a sufficiently powerful electrical current is the most rapid and humane produced by any agent at our command. "Second—That resuscitation, after the passage of such a current through the body and functional centres of the brain, is impossible. "Third—That the apparatus to be used should be arranged to permit the current to pass through the centres of function and intelligence in the brain."

ABSTRACTS

Epidemic Nephritis. Langdon Brown, Practitioner, Feb., mentions a series of 1062 cases in the English Army in June, 1915, the epidemic having been in progress since Feb. In 1916, even more cases occurred. 166 cases personally observed, showed early dyspnoea in 76%, oedema in 97%, 2 deaths occurring. In 102 cases, the urine was of normal amount but contained blood, epithelial, granular and hyaline casts. Oedema was noted in 18%. Caffeine compounds were considered inadvisable and the principal treatment was rest, restricted diet and hot air baths. No microorganism could be isolated.

Shaw, Dunn and McNee, Brit. Med. Jour., Dec. 8, 1917, state that nephritis has been particularly prevalent in the British Army, rare among Indian troops, in the civil population, and in men not actually at the front, more frequent in enlisted men than officers. Season, locality and bad weather seemed to have no influence. The frequence and precocity of dyspnoea was striking, being noted in 34 of 51 cases. Urinary examinations as found by Brown, bacteriologic examination negative also. Obstruction of the glomerular vessels by cells with almond-like or flattened nuclei and showing mitosis was noted, while the convoluted tubules were in a state of desquamation. The connective tissue of the medullary portion of the pyramids was in a state of hyaline swelling. In the lungs, were noted: acute emphysema, oedema involving the interstitial tissue and the mucosa of the terminal bronchioles and infundibula. There were some punctiform haemorrhages of the subpleural capillaries and thromboses of the alveolar capillaries. Minute haemorrhages of the white matter of the brain with a necrotic center, these lesions and those of the lungs resembling the results of phosgene gas. Relief occurred promptly on rest in hospital, or even promptly on removal from the front. It is implied that the lesions may be due to slight poisoning with phosgene.

Thomas Oliver, Brit. Med. Jour., Dec. 8, 1917, in the main corroborates the preceding but gives the mortality at 3-4: 1000, notes a persistent albuminuria in many cases over 30, and a urinary elimination of lead amounting to more than 1 m.g. a day, in 43%, Powell White, Loeper and Verpy having also found lead poisoning.

Surgical Results in the Aisne Campaign. Tuffier, Acad. of Med. Feb. 5, Le Prog. Med., Feb. 23, states that the total mortality in the Zone of the Armies was 5.18%. The Ambulance troops had a mortality of 17.7%. (It is the duty of the medical profession to dissipate the popular notion that non-combatant troops of the Medical Dept. are seeking a safe service. Practically all statistics show that the actual risk is higher for the medical dept. for officers or enlisted men, than for the line). Mortality from shock has diminished. Gas gangrene (fatal and non-fatal) involved 3%. Tetanus 1: 2000. Abdominal wounds gave a mortality of 18% (formerly about 65%); thoracic 10.27%; cranio-cerebral 9.67%. Fractures have given remarkably favorable results, under the general technic of excision and immediate or delayed suture.

Persistence of Peripheral Pulsein Wounds of Arteries, Fiolle, Le Prog. Med., Feb. 23, noted persistence in 3 of 12 "dry wounds" of arterial trunks and advises that the region of the wound should be explored.

Mediastinal Emphysema of Traumatic Origin. Gatellier, Le Prog. Med., Feb. 23, observed 5 cases in 209 wounds. Dyspnoea, syanosis and gas infiltration above the sternum are the chief signs. Thoracotomy with suture of the lung or subclavicular section and aspiration of air from all pockets are the anternative operations.

Renal Wounds. Chevassu, Le Prog. Med., Feb. 23, observed 46 recent and 10 old wounds. Haemorrhage and infection indicate immediate operation but nephrectomy should not be done unless absolutely necessary. Suture and tamponage usually control the haemorrhage. Old cases rarely show urinary abnormalities.

Bazy, ibid., had removed only one kidney for war wound. He insisted on the superiority of the transverse anterior route of operation. Lapointe believed in intervention in lumbar and lumbo-abdominal wounds but had practiced only two nephrectomies.

46 Abdominal Wounds Treated in a Divisional Ambulance. Seguninat, Le Prog. Med., Feb. 23. Operated 34 times with 12 cures. The interval before operation was 4½ hours or more.

Interlobitis in the Tuberculous. Charles Sabourin, Presse Med., Feb. 19, employs this term, indefensible etymologically, to call attention to localized inflammations or the pleura. He considers membranous pleurisy in form of shirt buttons as serious especially in weak individuals. Metapneumonic adhesive pleurisies cause adhesions of the lobes to each other and may surround the pericardium. Serous effusions are almost always absorbed, and may prove benign in facilitating the healing of pre-existing tubercular lesions. Every crisis of bacillar activity confers a certain degree of immunization.

Sudden Death With Nervous Phenomena in Case of Wound of Lung. Piery, Lyon Med., April, 1917, reports the case of a soldier wounded by a ball entering at the base of the neck, the wound of exit of the size of a dime, being between midway between the posterior border of the scapula and the spine. Signs of haemothorax and pneumothorax were found 10 days later but not at X-ray examination 6 days later still. At this time, the patient had rapid respiration but there was no cyanosis and the pulse was normal. He soon lost consciousness and oxygen, ether and caffeine injections failed to revive him, death occurring in half an hour. A fracture of the 4th rib was demonstrated but no explanation of the sudden death.

Intracardiac Projectile. Hartmann, Le Prog. Med., Feb. 9, reports the successful extraction of a ball from just above the apex, the patient having had a pulse of 140.

Period of observation.	Extremes	Ordinary range	General average
Beginning of evacuation..	1-5 min.	5-10	9-10
Duration of evacuation stage	1½-3½ hrs.	2-2½	2½ hrs.
End of evacuation.........	1½-3½	2-2½	2½
First appearance of bolus in colon	1-3	1½-2	1 hr. 52 min.
Duration of transit of small intestine, by first bolus,			
Duration of transit of small intestine by last bolus..	½-2 hrs.	½-1	1 hr.
Duration of evacuation period in small intestine.......	¾-2 hrs.	1½	1 hr. 25 min.
Duration of transit through small intestine of whole meal..	1¾-4½ hrs.	3-3½	3¼ hrs.
Time after which the whole meal is collected in colon.....	2-4 hrs	3-3½	3-½ hrs.

1. The beginning of gastric evacuation is scarcely influenced by small doses of papaverine—20 m.g. per kilo., is retarded by larger doses, by 30 m. g. more than by 50.

2. With all three doses, the evacuation proceeds more slowly than normal, the delay increasing with the dose.

3. The appearance of the first bolus in the colon is, perhaps, a little more rapid with the 20 m.g. dose, but delayed by the larger ones.

4. The same remark obviously applies to transit of the small intestines.

5. In all dogs to which papaverine was given, the calibre of the small intestine was reduced and there was intense peristalsis.

Cancer and Pancreatic Lithiasis. Jean Minet, Le Prog. Med., Mch. 9, reports a case of death from pulmonary apoplexy, the liver being studded with cancerous masses varying in size from that of a pea to that of a nut, the pancreas also being cancerous and enlarged to the size of an orange, the intraglandular portion of the duct being filled with rounded mossy calculi. The cancer was of cylindro-epitheliomatous type, the calculi being pure calcium carbonate.

Aneurysm and Aortic Insufficiency. Felix Ramond and Postina, Le Prog. Med., Mch. 9, report a case in a young soldier, aortic dilatation and insufficency of the valve following a wound from an aerial torpedo. Death ensued in three months (rupture not being mentioned). Necropsy revealed that the essential cause was an old syphilitic aortitis, the traumatism being an added factor.

Superior Mesenteric Embolism—Rapid Gangrene of Intestine. Guibe and Moreau, Le Prog. Med., Feb. 9, cites a case following toxic appendicitis.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

The Gross Medical Club held their bi-monthly meeting at the Motor Boat Club House, Silver Creek, N. Y., Thursday, Aug. 15th, as the guest of Dr. O. B. Barber.

A most interesting and instructive address, Crime and the Human Race, was given by Mr. Henry J. Girvin, Chief of the Buffalo Department of Police.

Capt. and Surgeon T. J. Kee of the British Army also addressed the meeting giving some first hand information from an experience of over two years on the western front.

Dr. B. E. Smith the president acted as toastmaster at the dinner which was served later on the broad veranda of the club overlooking Lake Erie.

Contents, Page 5. Index to Advertisements, Page 6. Publicity Dept., Page 20

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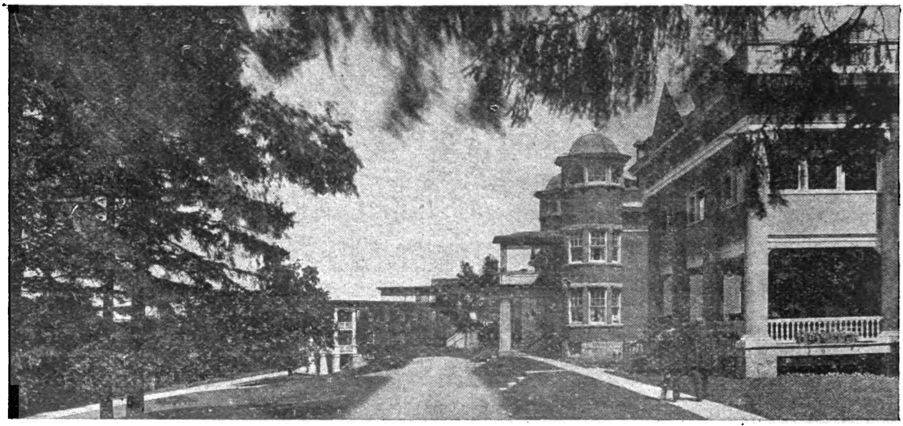

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CONTENTS FOR OCTOBER, 1918

Original Articles

Medical Supervision of the Coal Tar Industries. By Dr. F. G. Mohlau, Buffalo, N. Y. 79
Conserving Nervous Energy. By Edwin F. Bowers, M. D., New York City.. 85
Iron Carbonate Mineral Waters Without Excess of Carbonic Acid. By Dr. Felix von Oefele, New York City 87

Editorial

Military Prophylaxis of Venereal Diseases 98
Civil Practice 99
Post Bellum Problems 100
Air Space 101

Book Reviews 102
Topics of Public Interest 108
Society Meetings 116
Personals 116
Military Personals 117
Obituary 118
Abstracts at end of original articles on advertising pages and 118

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INDEX TO ADVERTISEMENTS

Manufacturers of Drugs, etc.

Battle & Co. 24
Bayer 8
Breitenbach Co. 17
Bristol-Meyers Co. 23
Carnrick Co., G. W., New York 3
Daniel, John B., Inc 24
Denver Chemical Co 15
Dios Chemical Co 7
Dugdale, Frederick 25
Dixson, John B 5
Fairchild Bros. & Foster .... Front Cover
Farwell & Rhines 4
Fellows 18
H.-O. Co .... Cover page 2
Katharmon Chemical Co 10
Mellier Drug Co 13
Mulford, H. K., Co 19
Od Chemical Co 11
Parke, Davis & Co .... Cover page 4
Peacock Chemical Co 16
Purdue Frederick Co .... Cover page 3
Richardson Co. 11
Sherman, G. H., M. D 24
Smith, Martin H 12-25
Southport Chemical Co 5
Sultan Drug Co 22
Tilden Co. 9

Instruments, Prosthetic Appliances, Lenses, etc.

(Buffalo unless specified)

Davis & Geck, Inc 25
Electro Surgical Instrument Co., Rochester 5
Fox, Geo. R., Optician 23
Kredo Co., Auburn, N. Y 25
Storm, Katherine L., Philadelphia 11

Druggists

(Buffalo unless specified)

Brooks Pharmacy 25
Kreuz, Peter J. 25

Automobiles and Supplies

(Buffalo unless specified)

Eisenhans Battery Exchange 25
Emery Mfg. Co., Bradford, Pa 25

College

University of Buffalo—Dental Dept 14
University of Buffalo—Medical Dept 14

Hospitals, Sanitariums, Hotels

Chalfonte, Atlantic City 26
Glen Springs, Watkins, N. Y 26
Homewood Sanitarium, Guelph, Ont., cover page 2
Marshall Sanitarium, Troy, N. Y 26
McMichael's, Dr. Sanatorium, Buffalo 26
Steuben Sanitarium, Hornell 26
Waukesha Moor Baths, Waukesha, Wis. 18

Milk, Etc.

(Buffalo unless specified)

Borden's Condensed Milk Co., N. Y. and Buffalo 12
Wheat's Ice Cream Co 21

Undertakers

(Buffalo unless specified)

Sauerwein, Henry 4
Farnsworth, W. H 4
Schlager & Son 4

Miscellaneous

(Buffalo unless specified)

Brainard, Harry, Insurance 23
Connor, R. H. & Co 4
Desbecker 25
Samuel Newman, Tailor 23
Scheuermann Co., Inc 12
Worthington & Sill, Insurance 4

Water

(Buffalo unless specified)

Hudor Co. 21
Creditors Commercial Corporation 16

Publishers

Albany Medical Annals 23
Detroit Medical Journal 21

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Yearly Volume 74 OCTOBER, 1918 Number 3

ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Medical Supervision of the Coal Tar Industries.

By DR. F. G. MÖHLAU, Buffalo, N. Y.

Protection of health of the working men engaged in the manufacture of Coal Tar Products is the most important problem facing the management of the Chemical Industries. The health of the worker naturally is a great asset to the successful maintenance of equilibrium.

It must be remembered that the Coal Tar industry is, comparatively speaking, a new one in this country, and the welfare of the worker must be scrupulously guarded along the most approved lines compatible with factory administration. The greatest care must be taken in introducing reforms and changes to obtain maximum results and reduce expense.

Health is the primary factor for the efficient performance of the working man's duties. Sickness decreases the worker's efficiency and production, and increases the risk of accidents in the various departments. An epidemic can disorganize a department, even the whole force of the factory. We have to consider outside influences, (environment, fatigue, accident), and inside influences (disease and defects).

Surroundings in factory work, such as light, ventilation and dust, influence the efficiency of the workers to a great extent, and to this may be added humidity and heat, also cold and drought.

In all human, or, broadly speaking, muscular activity, carbon dioxid is produced. With hard work, double the amount is produced and thrown off with the expired air. Toxic proteins are also thrown off of the working body. These toxic products are the odors we sense in an ill-ventilated (close) room. The headache, tired feelings, lassitude and malaise experienced in close surroundings, we must attribute to heat and humidity rather than to the inspiring of waste products. The effect of heat and moisture on the skin we must consider as the determining cause of discomfort. From these facts we gather that the working quarters must have a free circulation of fresh air, also that the humidity of the air surrounding the worker must be within certain limits in working quarters. It should have not more than six per 10,000 parts of CO2, the temperature should not rise above 68° F, and the humidity should not be higher than 72 wet bulb.

Good light is not only a prima facie factor in the health of the workman, but also in the efficiency of his work. General semi-direct illumination supplemented where necessary by individual shaded lights probably gives best results. Each worker, or group of workers, can thus regulate the light supply. The light should fall on the work and not on the workers' eyes. Thus, three dangers would and should be avoided: (1) over-illumination, which is liable to cause irritation of the retina or contracted iris, (2) under-illumination, causing eye strain, (3) reflected light on bright surface or colors tends to confuse and produce effects of over-illumination. Poor illumination, besides injuring the worker, reduces output and increases the number of accidents.

Fatigue should be carefully guarded against as it decreases capacity for work, and follows excess of work or lack of rest. No subject that has to do with industrial health has received more thought and attention than industrial fatigue. Especially since the beginning of the war the question of fatigue has found serious consideration by the ministers of war munitions all over Europe. From a physiological standpoint, we have for instance the poisons produced by the contraction of the muscular fibres, especially the voluntary muscles, the changes of glycogen in the muscles, and the consumption of the stored-up glycogen in the muscles and liver. Even physiologically these substances are of an acid reaction due to carbon dioxid and sarcolactic acid. These are the factors producing fatigue, not only causing a tired feeling in the muscle, but also in the nerves and nerve centers. These waste products are eliminated slowly or gradually during the period of rest which, naturally, is necessary for the repair of body waste, and for this reason it must be understood that rest during the working days is necessary. If sufficient rest is not allowed a deficit is the result and we must consider this an injury to the working power of the following days. The strain of the work done after such symptoms are manifest, not only requires more effort, but also results in defective production. The effort increases, but still you must acknowledge that during such conditions the working man accomplishes less. Over-work must be guarded against. You must also consider that over-work, where fatigue is manifest, increases the danger of accident, and is the starting point of impairment of health.

As the type of work varies in different departments, the physical condition of each man is varying, and so will the efforts put forth vary and increase or diminish the working power.

Considering accidents, we always claim that they are largely due to carelessness on the part of the working man. But, while a great percentage of accidents are caused by carelessness, we must admit that in coal tar industry they are due to the complexity of the work rather as compared with the worker's ability and knowledge. The continuation of the work of any man we must consider as defective until he has completely recovered of such an accident. The proportion of accidents due to sickness or physical defects is generally considered rather low as records here will show. All accidents, no matter how minute, should therefore be treated by able assistance; injuries in any way serious should be attended by a trained surgeon. By prompt and efficient treatment is meant that the workman should be taken care of within at least thirty minutes of such injury.

Physical defects are an aggravating factor against health and a cause of accidents if the worker is not properly placed. A defective worker is not by any means an inefficient worker, and inefficiency only occurs when the physical defect interfers with the power of producing a normal output, especially by fatigue and discomfort. Defective workers are very often the best workers in certain departments, but they will not remain so unless properly supervised.

Sickness is prevalent among a large percentage of workers, is most marked during changeable weather or high temperature, and is an important factor in the loss of time. We can safely state that 2% of all working men at one time or another are absent on account of sickness. These conditions should most seriously be guarded against and all efforts should be made for the protection of the health of the working man. Absentees from work naturally decrease the output.

Considering the foregoing factors which control the health of the worker, it is evident that the responsibility for the workers' health falls on four men: the engineer of the plant, the safety engineer, the manager of the works, and the factory surgeon.

1. The engineer of the plant controls the external factors of environment.

2. The safety engineer controls the external factors of danger.
3. The manager of the works controls the external factors of fatigue.
4. The factory surgeon controls the internal factors of disease and physical defects.

No further consideration will be given the first three. Each is a specialty in itself.

We will now consider the work of the factory surgeon and the medical supervision of the workers.

The object of medical supervision is to control the health of the working force by instituting and maintaining methods of prevention of disease; by prompt attention to accidents and, through careful after-care, prevention of disability as far as possible; by finding defects in workmen and repairing them and if this is not possible, endeavoring to place the defective workman where he will be most efficient; by the education of the workman in matters of hygiene; and by the control of sanitation and matters pertaining to the health of the factory at large.

The essential knowledge of the physical condition of a working man is gained by the physical examination. Many a defect is discovered during the examination, and if the employee is placed in the proper department and the defect guarded against with efficiency the condition will gradually be improved. Workers can be enthused to co-operate with the physician or surgeon in helping those under supervision and enforcing his advice. The value of the physical examination to the factory and to the worker becomes plainer every moment.

Defectives may be divided into two classes: (1) those who can be easily relieved by medical supervision and placed accordingly, and (2) those who can be assisted by medical advice only.

The first class of defectives are those with defective eyes, ears, heart, lungs, and certain defects of the extremities.

Eyes and ears are of particular importance in office work. Slight refractive errors, if not corrected, lead to eye strain and poor work which can be of no advantage to anybody. Slight deafness among stenographers is liable to produce considerable nerve strain and such work should be carefully avoided. Defective hearts are factors of different moment. The average patient with a compensated heart is able to do considerable work without any trouble, yet a long strain should be avoided and all exercise should stop when troubles manifest themselves, to avoid exhaustion. Defective extremities are a less important factor and are not to be considered in this short resume.

Of course, it must naturally be seen to that defectives are placed in suitable departments. Medical supervision, therefore, should actually begin with the primary examination, and each worker known to be defective should be reexamined at reasonable intervals as long as he is working at the same factory, and careful advice given him during the period of disability and strict instructions during his working time. Medical supervision should preserve the general health of the working man and should be a most prominent factor in educating the worker how to live, and opportunities should be given for interviews between such defective workers and the factory physician or surgeon.

The great bulk of sickness among working men is of minor character, yet unless carefully treated may lead to more serious conditions, which naturally should be avoided by all possible means. If we consider the time lost in working hours, this becomes very apparent.

Not only this, but also the welfare of the working man's whole family should be at heart of the employer, and great benefits may be derived by giving him an opportunity to consult with the factory physician as to the health of himself and family; for even his family troubles will influence the efficiency of the working man. By giving a helping hand, faith, satisfaction and an effort to do better work will be the results.

In transferring a man from one department to another, which should be out of the question without a physical examination, the problem is to allot work in harmony with the man's constitution. While ailments of the worker may be of small importance in one branch of the factory, the health or welfare of the man may be jeopardized by changing about to another department.

One more serious and important factor in the welfare of a factory is the care and consideration the worker receives from his Superior and from the Medical Department, to which the welfare department must be subservient if results are to be obtained.

The best index as to sickness, number of accidents, and the character thereof, is the record of lost time. Sickness and accidents among workers are almost equally prevalent and should receive the same care and attention. I consider that when the time lost for personal reasons and time lost for sickness are about even, or the time lost for personal reasons somewhat greater, good medical service is being provided. So far, I am sorry to say that no such records are being kept, but I am sure that the time lost without given reason is enormous. Deficient medical service and inadequate welfare are the great factors in the permanent number of floating workers. Good results can be obtained only by making the men feel protected and keeping a careful check on each case of sickness and accident, and by an efficient follow-up system keeping in close personal touch. It is the keynote of success to keep the heart and confidence of the worker.

The whole question of the preservation of the health of the worker in hazardous surroundings evolves itself into education and service:—education of the employer as to the economy of preserving the health of his employee and education of the employee as to how to live and how to avail himself of proper medical supervision. Once this education is accomplished, success is assured, and the migrating worker eliminated. The result will be efficient service and a faithful employee.

The instruments of service are the Industrial Physician, Nurse and Hospital. The Industrial Physician now must be considered a specialist, and as it is well understood, one of high order and value, whose development has taken time and patient study. His equipment and training are special (should be), and more closely approximate those of the Military Surgeon than any other branch of the profession. His responsibilities have been outlined to some extent in these paragraphs and it must be evident from what has here been put before you that his responsibilities are great, and beyond dispute. Personally, I have put forward an effort to solve the problems and demands of the medical needs in the Chemical Industry that has been altogether new in this country, and in order to do justice to the service much improvement is necessary.

Natl. Aniline & Chem. Co., Buffalo, N. Y.

Bullet Penetrating Aorta and Lodging in Femoral Artery. Roualt, Le Progres Med., Jan. 26, describes the case of a soldier wounded in the right scapular region. Motor and sensory paralysis of the leg, haemothora and haemoptysis, beginning gangrene of the leg were the principal manifestations. The ball was at first missed by radiography but later found in the triangle of Scarpt and was located within the femoral artery and removed. Death, however, followed and, on necropsy, it was found that it had splintered the fourth rib, traversed to lower lobe of the lung, entered the orata just below the arch and had lacerated the internal coat on the opposite side, the wound of entrance into the aorta having healed. The ball then advanced until the gradually diminishing calibre of the arterial branches stopped it, with shutting off of the circulation, the sudden ischaemia of the nerves rather than any actual traumatic lesion, determining the **paralysis.**

Conserving Nervous Energy.

By EDWIN F. BOWERS, M. D., New York City.

If human beings took as much interest in preserving their energy as they do in preserving their clothes, they would be far less interesting as medical "cases."

We waste, in a thousand useless ways, sufficient dynamic and physical force to do the work of the world many times over. We apply efficiency to about everything under the sun except ourselves.

The nervous, high-strung mother who is eternally admonishing the youngsters not to do whatever they are doing—or what about to do—is wasting her precious balance in the bank of health faster than two women could manufacture it.

And the fussy, worrying individual, who has no more idea of repose than has a Japanese waltzing mouse, is a source of anxiety to himself and a full-fledged cause of annoyance and irritation to every one who is penalized by having to associate with him.

Few realize that we have but a certain amount of physical and nervous energy to expend, and that if we waste it in futile and non-productive activities we certainly are going to run shy of "punch" when the real need comes to show efficiency. If every one could know the value of a few minutes' complete relaxation,—the sensible utility of sitting back "as loose as ashes" once in a while there would be a dearth of nervous breakdowns.

If the student, the mother, the brainworker—if every one who uses energy faster than he manufactures it—would get into the habit of "stretching out" and completely relaxing when they begin to feel fatigued, and give nature a little chance to recharge the magnetic and nervous batteries, we shouldn't need to worry about the lack of insane asylums.

These ought to be obvious facts. Perhaps we ignore them because they are obvious, and because to find out about them costs us nothing except a siege of illness or a ruction in the family. If nervous and physical conservation were something one could take in a pill, we'd be all falling over one another to get a supply.

But we spend large amounts of A-1 vitality in soul-racking worry, rapid-fire nervous explosions, and fatuous over-exertion. And then we wonder why adult longevity is decreasing. We wonder why we have to make an involuntary assignment in physical bankruptcy at forty-five or fifty, when we should have a plethoric surplus in reserve.

Not all energy dissipation, however, lies within our own preventive power. An incalculable amount of waste occurs because our eyes are too civilized—because we are overworking weakened external eye muscles sixteen hours a day too long. Nervous exhaustion, epilepsy, "stomach trouble," rheumatism—and even such grave diseases as goiter, diabetes, and Bright's disease—are cured by correcting imbalanced ocular muscles.

In the important matter of sleeping we also leave much to be desired. First, our archaic habit of sleeping two or more in bed prevents our securing the quiet and repose that should accompany any successful effort to woo Morpheus.

And we are not so particular concerning the comfort qualities of our beds, as we should be. Hitherto, anything that stood on four legs, and had a spring and a mattress, qualified as a bed—whether it fulfilled the functions of a bed or not.

Forget not that the place where we spend approximately a third of our lives has got to be something more than merely a piece of furniture, in order to contribute its quota toward maintaining our efficiency. It's got to be an institution for encouraging and facilitating sleep.

Also, we pound a lot of energy out of our systems by decorating our heels with two chunks of leather jammed full of large and very unyielding nails. We pursue the uneven tenor of our ways over hard, unsympathetic pavements, jouncing our internal organs into a state of prolapsus and mauling our sensitive backbones and delicate nervous systems at every step. A pair of springy rubber heels would take the shock out of our systems, and remove one chronic cause of irritation and debility.

Then, by wearing pointed shoes, we twist our big toes out of their true straightforwardness, and turn them in toward the foot center. This foreshortens the longitudinal arch, relaxing the tension of the muscles and ligaments forming that arch, which in turn causes a relaxation of the transverse arch muscles. This is the chief cause of flat foot, one of the meanest energy-robbers that infests the human race.

To correct flat foot, and prevent this energy loss, properly adapted, scientifically constructed shoes should be fitted and worn, and suitable exercise should be taken for a sufficient length of time—although temporarily some mechanical arch support may be required.

Anything and everything that prevents energy loss adds to the health balance. And to have a fine fat health balance is to own the highest dividend-producing investment in the Bank of Life.

Acute Nephritis. Lt. Wm. Wise of Hartford City, Ind., Ind. Med. Jour., Dec. 1917, reports a case that had 13 uraemic convulsions but that recovered.

Iron Carbonate Mineral Waters Without Excess of Carbonic Acid.

DR. FELIX VON OEFELE, New York.

Iron is what we called in previous publications a valid constituent of mineral waters. The element iron is a predominant constituent of the whole mass of the earth. It seems to be the principal part of the interior of the earth. Of the surface strata it forms a smaller percentage on account of its high specific gravity sinking in to the depth. The different oxydes of iron are soluble in water with great difficulty. The soluble iron salts derived from the different iron oxydes show a remarkable tendency to dissociate with a precipitation of oxydes or basic salts. Where strong acids are present in excess a high percentage of iron salts may be dissolved. These mineral waters are listed with the respective acids within the supermineralized waters.

Of the carbon derivatives tartaric acid, citric acid, oxalic acid and many other multiple organic acids form soluble iron compounds of the ferrous as well as of the ferric type. The iron carbonate is only the lowest member of this group.

Iron carbonate mineral waters are low mineralized waters. The organic constituents of the drift in the oxydation degree of crenic acid are able to react to iron salts of the soil and to form a solution. The further oxydation will form ferrocarbonate. Ferrous carbonate is soluble in an excess of carbonic acid. Every mineral spring contains some small trace of this ferrous bicarbonate dissolved, many contain determinable amount. These waters having appeared to the surface give off the excess of carbonic acid, absorb oxygen of the air and precipitate insoluble black iron oxydul oxyde. In this way the black magnetic iron stone is formed having lost the water. Where the oxydation advances the brown iron stone may be formed as semihydrated product and having lost the hydration entirely, the red iron stone is formed. Where the ferrous carbonate is precipitated by evaporation of the carbonic acid excess and where the precipitate so formed is protected from further oxydation, the iron spar is formed. Where a sufficient excess of carbonic acid to form a ferrous bicarbonate is present and persists for some time, an iron carbonate mineral water appears which we will call steel water.

In as much as steel is a combination of iron and carbon, iron carbonate springs not considering the oxygen of the molecules present have been called steel springs or with a scientific foreign word chalpbeate springs.

I have collected a list of 79 German mineral spring locations known by iron content of their mineral springs.

SIMPLE STEEL SPRINGS.

The simple steel springs are as a rule low mineralized drift springs or shallow strata springs. The dissolved carbon dioxyde under high atmospheric pressure increases the dissociating and dissolving power more for lime and magnesia than for iron salts. Springs with carbonic acid of very deep origin contain mostly iron as a small and not remarkable percentage of total solids. The carbon dioxyde of drift springs is a product of organic decomposition within the drift.

Iron is found over the entire earth's surface. A sufficient concentration of iron to form iron springs is very irregularly arranged in sedimentary rocks. Simple steel springs may be expected as isolated springs in all the sedimentary rocks furnishing low mineralized waters where the oldest central mountains of crystalline rocks show the mica contained rich in iron.

The condition for thermal steel springs is very rare. Where low mineralized thermal water rises from deeper rocks, the condition of the carbonic acid of the drift loses the possibilities to dissolve iron salts of the uppermost strata. Simple steel springs are mostly cold springs.

What we will call abundant iron content of a mineral spring exceeds rarely 0.001 to 0.01% iron salts calculated to the water itself. Many of the iron springs contain usually an additional small amount of arsen. If arsen reaches over a certain percentage of iron, the spring may be called an arsen spring.

The additional presence of a small amount of phosphoric acid and silicic acid in a mineral spring keeps the oxydation products of iron for some time in a semi-dissolved opalescent condition. The time necessary for precipitation depends from the amount of sulphuric acid present. A scarcity of sulfates hurries the precipitate to become yellow and later ocker-colored. Other conditions change the colors.

Steel springs form a yellow to brown or red sediment, the so-called spring ocker. It is easily noticed by every layman. This precipitate is known every where in the old world as iron compound. Steel springs are long used mineral springs known in a time long before analytical chemistry. Pyrmont in Germany was used in the times before the Roman empire. Old northern fibulas with characteristic decorations have been found as token of thankful patients.

For the modern scientist, the precipitation of spring ocker is not a complete evidence of a real iron spring. Other constituents may prevail. This prevalence may be so strong that the iron present is not remarkable for the therapeutic value and is not noticed in the classification of many mineral springs. In these cases often the principal amount of iron compounds is precipitated. Arsen is completely precipitated. Other constituents become insoluble only in small traces or not at all. The spring ocker is a concentrate of the spring iron and related substances. The water remaining is poorer in these constituents.

The tendency to form spring ocker makes it hard for bottling and shipping the related waters. It is worse for waters where the iron is present in very small amount and is not remarkable for the therapeutic value of the water concerned. Many such mineral waters are found in America where the iron contained is considered more as an impurity than as a therapeutic adjuvant. I found the trail of Professor Chandler who recommended at Saratoga Springs, at Ballston Spa and elsewhere in many cases the addition of citric acid to overcome the precipitate of troubling iron. This addition is an adulteration if the label bears the claim of natural mineral water.

This is not the place to give my advice and experience for bottling without chemical addition and without precipitate. I wish only to emphasize that bottling is possible. No air whatever should come in contact with iron water until it is used.

In Europe there are springs with iron carbonate without considerable excess of carbonic acid, iron carbonate springs with considerable excess of carbonic acid, alkali or earth carbonate springs with considerable adjutory iron, sodium chloride springs with considerable iron, iron sulfate springs and sodium sulfate springs with considerable iron. The average of American mineral springs is less basic and more acid than in Europe. On this basis America contains additional mineral springs with remarkable amount of iron chloride and acid springs with iron sulfide. Springs containing iron chloride are very rare in Europe.

The leading iron springs of Europe and America are the cold simple steel springs. The indication of all iron springs relates to an increased iron supply in an insufficient function of the blood present.

James K. Crook unites all the mineral waters containing iron into the classification of Chalybeate Springs. He makes some subdivisions. Crook mentions as the most important Chalybeate Springs: Round Spring at Aurora Springs, Missouri; Matchless Mineral Wells, Alabama; Arkansas Lithia Springs, Arkansas; Pacific Congress Springs, Fulton Wells and Pagoda Springs, California; Fuller Springs, Georgia; Indian Springs, Indiana; White Sulphur Springs, Iowa;

Topeka Mineral Wells, Kansas; Addison Springs, Maine; Londonderry Lithia Spring, Vermont; Health House Springs, New Jersey; Adirondack Mineral Springs and Oak Orchard Springs, New York and Putnam Springs at Saratoga Springs, New York; Gaylord Springs and Gulick Springs, Pennsylvania; Austin Springs, Tennessee; Overall Mineral Wells, Texas; Bath Alum Springs and Rock Enon Springs, Virginia.

Not only one of these mineral springs mentioned by Crook can be classified. A sufficient analysis of many of them is missing. Additionally Cienega (Manantiales de la —) in Yucatan, Mexico, is claimed to contain abundant iron. If such and similar other claims are believed at all, they do not enable a classification of the mineral spring concerned.

SIMPLE IRON SPRINGS.

Springs below 0.1% total solids with over 10% iron salts are real iron springs. They contain the iron as carbonate of the oxydul without a remarkable excess of free carbonic acid. 1 to 10% of total solids iron salts is a remarkable iron content. If hydrochloric or sulfuric acid prevails or carbonic acid reaches a remarkable atmospheric pressure, a higher amount of iron may be present. Such springs will be classified later with these respective acids.

The properties of iron salts are very striking for the human senses. The submineralized and the supermineralized springs containing remarkable amount of iron can not be separated strictly every time from the real iron springs, particularly not for the therapeutic indications.

THERMAL SIMPLE STEEL SPRINGS.

There are no real thermal iron waters in Germany. Few of them are in Austria, France and Russia.

Of Newsom's Arroyo Grande Springs, California, different springs are rich in iron and potassium. The warmest of 38°C is the only one that has been analysed. 0.0634% total solids with near 11% iron carbonate, 8% potassium salts and 25% magnesium and calcium salts. The water contains 0.0012% free carbonic acid and 0.0004% weight hydrogen sulfide.

Puller Springs, Montana, claims without analysis two iron springs of 35°C and 41°C 1850 meter over sea level, this is claimed for rheumatism.

COLD SIMPLE STEEL SPRINGS.

All the "Steel waters" of Germany and Austria are cold. Not one exceeds 20°C. The condition above explained producing steel waters is rarely found in plains. It is often found in the valleys of hilly districts having concentrated the iron extracts of the neighbouring rocks. Often the steel springs have a high elevation over sea level.

In many cases where steel water is indicated, this elevation is important for therapeutic efficiency.

European Springs of less than 1000 feet elevation are: Schwalbach in the Taunus, Hessen-Nassau with Stahlbrunnen, Pyrmont, Waldeck with Trinkbrunnen, Brueckenau in the Rhoen Mountains, Driburg and Boklet.

Between 1000 and 2000 feet are; Spaa in Belgium with a spring called "Pouhou," Liebenstein, Meiningen, Petersthal, Cudowa, Altwasser-Flinsberg, Silesia, Franzensbad, Bohemia, Lobenstein, Reuss, Alexisbad in Harz, Elster, Griesbach, Autogast, Rippoldsau, Schwarzwald, Reinerz.

5500 feet elevation shows St. Moritz, Switzerland with "Grand Source."

The elevation as well as the iron absorbed causes a reaction forming a larger number of red blood corpuscles. An excessive high elevation exceeds often the power to react of the patient concerned. For very important cases, it is usual in Europe to select a place 900 to 1200 feet higher than the steady residence for the first stay. After few weeks then a second place of higher elevation is recommended.

The most European Steel Springs are submineralized springs with predominant or remarkable amount of iron. The most European iron spring resorts contain more than one spring. We list only the highest and lowest figures in the following enumeration: St. Moritz 2 to 4% of total solids, Elster 1 to 4%, Pyrmont 1.5 to 3%, Franzensbad 0.2 to 2.5% and Liebenstein 0.5% of total solids iron compounds.

There are no iron springs properly speaking. The absolute amount of iron compounds is very low: Brueckenau 0.0002%, Reinerz 0.001 to 0.004%, Franzensbad 0.001 to 0.013%, St. Moritz 0.003 to 0.005%, Pyrmont 0.004 to 0.008%, Rippoldsau 0.005 to 0.013%, Elster 0.006 to 0.009%, Triburg 0.007% and Liebenstein 0.009%. All kinds of iron waters have been listed above.

European Steel Springs with remarkable iron content of this class are:

Wernazer Quelle at Brueckenau contains 0.01% bicarbonates of the earths, very little other constituents and almost 2% of total solids ferrous bicarbonate.

Freienwalde with Koenigsquelle and Badequelle contains about 0.03% total solids; bicarbonates of earths predominate and carbonic acid is somewhat in excess. 2 to 7% of total solids are ferrous bicarbonate. The advantage of Freienwalde is the situation in the neighborhood of Berlin. The metropolitan people prefer a place for their sick girls and young brides a short distance from the residence.

Kohlgrub, Bavary, contains 0.09% total solids almost exclusively bicarbonates of earths and 7% of total solids ferrous bicarbonate. It may be reached within two hours from Munich.

Other famous European steel springs are:

Tunbridge Wells in England, Liege in Belgium, Grisons in Switzerland, Krynica in Galicia, Syliacs in Hungary and Rodna in Siebenbuergen.

150 to 100 years ago steel waters were highly recommended by every scientific physician. They have been used for about every indication with the sideline of improved blood. These recommendations exceeded evidently the true value. The reaction followed with an insufficient estimation of steel springs today. The truth seems to be between the extremes.

An improvement of the blood by an increased iron supply was the old idea. The time of reaction denied the resorption of iron at all. But this is wrong. My friend Goldman at Sopron, Hungary, showed with scientific exactness the ability of the human skin for absorption of iron to the system. The internal absorption is still greater.

It is explained that the iron percentage of the strongest iron springs is very low. Nevertheless every internal use of iron water forces the digestive tract to hard work. It is less hard than the digestion of artificial iron preparations, but it is hard. It needs an individual selection to recommend an iron spring and an expert physician is necessary as guard to accommodate the single application.

Some times the excess of carbonic acid, some times the low temperature causes trouble. In these cases a certain preparation of the water for the single patient is necessary. Women folks or females are mostly the users of iron springs. The tendency of iron precipitation colors or shades the teeth. This is often feared on a cosmetic reason. At many iron spring resorts it is usual to drink the iron water through straws as prevention of a contact with the teeth. At other springs the mouth is washed immediately after the iron water by iron free water or by suitable artificial preparations.

It is an old experience that raw berries and fruits should not be used during an internal iron spring treatment. The experience is correct, but it is a mistake to blame the tannic acid for the bad effect.

INDICATIONS FOR IRON SPRINGS

The physiological and therapeutical usefulness of iron springs is based on the small iron content of normal human organism. The total amount of iron of a healthy adult is about 3 grams. In cases of chlorosis the body is deficient in iron. This shortage may amount up from 0.6 to 1.25 grams in serious cases. The daily supply and output is about 0.06 grams. The absolute need of iron is understood to be very small. But the amount of iron supply is less important than the possibility of absorption of an iron supply and of retention of the iron absorbed. Concentrated anorganic iron compounds are often easily absorbed within the upper part of digestive tract and after a few hours excreted by the colon without real assimilation.

The usual medical text-books do not show a clear idea what happens with steel waters within the digestive tract. Our own very numerous examinations with single duodenal tubes or with combination of stomach tube and duodenal tube prove the superiority of submineralized steel springs. Food and high concentrated iron drugs stay for a long time in the stomach and react chemically with the free hydrochloric acid of the stomach. Iron concerned becomes iron chloride which is absorbed and immediately reexcreted by the colon. Submineralized steel water enters and passes the empty stomach without delay and without production or influence of free hydrochloric acid. It enters as ferrous bicarbonate the small intestines and reaches the blood as ferrous bicarbonate which is able to enter the blood corpuscles while ferrous chloride and ferric chloride are not able.

This is in accordance with the general experience of medical practitioners that the prescription of a natural iron spring is more efficacious than any artificial iron preparation. Since the powdered haematite of old Babylonians up to the most recent preparations, history repeats that a new artificial iron compound comes in use, becomes recommended with exaggeractions and becomes finally antiquated and forgotten. That opens a place for new iron preparations repeating the same history. The only persistant iron therapy through thousands and thousands of years in the old country is the use of iron springs. Pyrmont in Germany has been already mentioned and used according to excavations more than two thousand years ago by a population of its vicinity not far over the culture of Indians at the time of Columbus and is still used by the patients of international high life of today.

Iron given by the mouth has been found in the lymphe of the ductus thoracicus. Iron chlorides and their derivatives disturb there the regular chemism of Syntonines, Peptones and Aminoacids. This circumstance forces the automatic regulation of the organism to a quick excretion of the total iron chloride absorbed.

If iron is taken by the mouth, a part stays unabsorbed within the digestive tract and is excreted by the feces. The feces become black-green. The excreted iron compound concerned is iron oxydul according to Quincke. Some decades ago it was mistaken for iron sulfide. Usefully absorbed iron has to remain a long time within the organism in organic combinations. It is important that the blackish green feces are not seen in iron mineral spring resorts after the use of iron mineral spring waters. It happens there only as an exception if the iron water had been taken together with fresh berries.

The principal amount of iron of the human body is contained in the haemoglobin. The haemoglobin has the property in an excess of carbonic acid to combine with carbonic acid and in an excess of oxygen to combine with oxygen. This circumstance enables the haemoglobin to take the excess of carbonic acid formed in the tissues and to excrete by the lungs and to join within the lungs some of the excess of oxygen of the air and to carry to the tissues.

The organism has to intend to keep the stock of haemoglobin. Inevitably some of the haemoglobin of the blood is used up and has to be replaced by haemoglobin newly formed. That is where the principal amount of new iron supply of the body is for. Different races and different individuals of the human beings require different amounts of iron used up in the metabolism. The same human being needs less haemoglobin staying on sealevel plains where the air shows an average higher barometric pressure and needs more haemoglobin far up in the mountains with very thin air. This is easily understood by the above explained work of haemoglobin as oxygen and carbon dioxyde carrier. Every human organism shows a certain adaptation for regulation of the haemoglobin present. We spoke above about this matter calling it the power to react.

Besides the tendency to stay within the level of haemoglobin percentage liver, spleen and marrow are places of storage for iron excess for periods of increased need. The physiological functions of the female organism shows larger undulations of iron content than the male. It is understood therefore that female patients need oftener a therapeutic increase of iron supply and that a high elevation over sea level favors the assimilation of a higher iron supply. For no other class of springs the high elevation over sea level is equally important.

Chlorosis, anaemic conditions after serious losses of blood, convalescence from acute diseases, overwork of muscles or brain, Basedows disease, pathologic condition of spleen, liver or kidneys after malaria or salvarsan treatment, chronic diseases of the female sexual organs, irregular menstruation, chronic metritis, sterility, habitual abortion, pathological feebleness of the male sexual organs, particularly spermatorrhoea, pollution, impotency, chronic disease of the nervous system, general functional neurosis, nervosity, neurasthenia, hysteria, spinal irritation are the indications for the internal use of steel springs. The female patients predominate.

Where iron waters and especially iron carbonate waters are in contact with the air, oxygen of the air is absorbed and a colored precipitate is formed as explained above. This direct precipitation without other natural admixture we will call "spring ocker."

This spring ocker collected at the mineral spring itself may be used for internal treatment. It is a natural finely divided and resorbable iron powder with a slight arsen reinforcement. It is the best internal product which may be transported from an iron spring without necessary deterioration.

The author has prescribed successfully in his European practice daily 0.01 gram increasing in 10 days to 0.1 gram and again decreasing to 0.01 gram spring ocker, with sugar mixed and compressed to tablets in cases of chlorosis of girls. It is the best obtainable iron preparation in a dry shape. In regard to the effect on the skin color of girls, Bombelon called this preparation beautifying lozenges.

Where the iron water runs from the springs and becomes mixed with decayed organic matter, particularly swamp grass and tree leaves, it forms black, red or yellow iron mud. This mud is very valuable for external treatment. We will call it "steel moor." It is used for general mud baths and for local mud cataplasms.

Steel moor is abundantly used in European mineral spring places. This use is somewhat restricted as far as many mineral spring places became entirely exhausted of the prehistoric deposits of this material. Other places use only a restricted amount to evade this exhaustion.

This original natural "steel moor" must be dug from the moist soil and piled up. It becomes dry and is decayed further by atmospheric air. For the application it is mixed with hot water or boiled. A thick heavy liquid may be produced for bathing in. Many kinds of European "steel moor" contain sulfates. The iron sulfate present and often half compound acids of concerned acid salts have a strong chemical influence to the human skin with a therapeutic efficiency. Steel moor baths may be used with a higher temperature than other mineral baths and common baths. The body does not feel attacked after an overheated mud bath of steel moor.

There have been told certain indications for Akratotherms and almost contrary indications will be told for brine baths and carbonated brine baths. Baths with steel moor are an intermediary link between both. The particular indications are neuralgia, paralysis, chronic muscular and articular rheumatism, arthritic deposits, the following conditions from traumatic influences are exudates of the pelvic cavity.

If we travel up hills from the eastern sea shore, we very soon find many iron compounds in some places of glacial drift. New Jersey is known as the state of the red mud what means really mud rich in iron. The northwestern corner of

Long Island contains waters rich in iron. The insufficient elevation and other less desirable properties excluded the springs of these locations from the medicinal springs. They have been also continuously excluded from the water supply of greater New York for domestic use and for industrial use. They are found where cretaceous rocks are covered by glacial drift. Valuable iron springs are situated in different places of the Atlantic mountain declines farther up.

AMERICAN LOW MINERALIZED COLD IRON WATERS.

Sparta Magnetic Well at Sparta, Monroe County, Wisconsin, 0.033% total solids including over 60% iron carbonate.

Chalybeate Spa at White Sulphur Springs, Sullivan County, New York, with 0.0068% total solids including over 50% iron salts. The author has personally analysed and studied this mineral spring place. Accommodations for high class people are found at White Sulphur Spring House. Many cheaper houses are a short distance away; cottages can be rented by the week for housekeeping. The spring is in use since 1888 and is equipped with a bathing house. Iron mud of inexhaustible amount is present. The mineral springs themselves are not yet sufficiently accessible and not yet properly collected. The place is filled during July and August. The therapeutical conditions for gynaecological diseases are far more favorable from middle of May to July. It is the nearest iron spring for New York city and joins the advantage of Freienwalde in regard to Berlin with the medicinal properties of St. Moritz, Switzerland.

Aurora Springs, Missouri, with 0.0357% total solids including over 30% iron salts.

Iron Lithia Springs, Virginia, with 0.0380% total solids including 23% iron sulfate.

Hurlburts Springs at Cambridge Springs, Pennsylvania, with 0.0088% total solids including 10% iron oxyde.

Remarkable amount of iron is contained in the following mineral springs:

Adirondack Mineral Spring, Washington County, New York, with 0.1307% total solids can not be separated from this group. It is situated in the sixth district of the Middle Atlantic Area as a northern outpost island of the Catskill group of medicinal springs. The total solids include 61% earthy salts with predominant carbonates and about 7% iron carbonate equal to 0.0086% of the water itself.

Chalybeate Spring at Harbin Hot Springs, Lake County, California, with 0.0791% total solids including nearly 70% alkali salts and 4% ferrous carbonate.

Chalybeate Spring at Estill Springs, Estill County, Kentucky, with 0.0882% total solids including 75% earthy salts and 3.5% iron carbonate. Half combined and free carbonic acid are present in 0.112% weight of water.

Claremonde Chalybeate Spring, Washington County, Georgia, containing about 0.0007% iron carbonate in the water and few other contents not determined quantitatively.

Green Lawn Springs, Jefferson County, Illinois, P. O. Mount Vernon, claims six springs from a vertical stratum of slate. One is called Washington Spring containing carbonates of iron and earths and excess of sulfohydrogen and carbonic acid gas. The water is internally used for dyspepsia, torpid liver, biliousness and other disorders of the chylopoetic organs. The bathing with this water is claimed useful for rheumatism.

Chalybeate Spring at Greenbrier White Sulphur Springs, Greenbrier County, West Virginia, with carbonate of iron has not been fully analysed.

Mountain Springs, Lancaster County, Pennsylvania, may be a carbonated iron water with high elevation.

North Haven Pool, New Haven County, Connecticut, contains iron carbonate and other contents, only qualitatively determined.

Bartlett Mineral Spring with 0.0230% total solids and Petticord Spring 0.0189% total solids at Cambridge Springs, Pennsylvania, contain remarkable amount of iron.

Extradorsal Anaesthesia. Gil Vernet, Hojas Medicas, July 1917, injects to both sides of the sacral trunk, in the shape of a V. The solutions consists of novocaine 0.20, potassium sulphate 0.20, paraphenol disulphonate of anaesthesin 0.20, adrenalin hydrochlorate, 1:1000, 1 c.c., sodium chlorid, 1: 1000, 0.9 c.c. The patient is placed on the belly, with the pelvis slightly elevated. A needle 12 c.m. long is used. Anaesthesia results in 20-30 minutes and lasts 1-2 hours. Colporraphy, internal and external urethrotomy, haemorrhoid operations, prostatectomies, castrations and operations for rectal prolapse, have been successfully performed.

Prolonged Gestation. Roger Williams, of London, Practitioner, Jan., reports a case delivered of a healthy female child, by forceps. The last menstruation ceased exactly one year previously, the last coitus having preceded it a few days.

Ether as an Antiseptic. Le Moniteur Med., Mch. 19, states that military experience has shown this substance to prevent suppuration and gangrene and to facilitate rapid healing. One surgeon even relates a case that healed rapidly after a bite by a rabid dromedary.

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Military Prophylaxis of Venereal Diseases.

Both in the Navy and the Army of the U. S., there has been adopted as a basic principle of preventing venereal diseases, not a method of abortive treatment misnamed prophylaxis, not a system of inspection which cannot either practically or theoretically diagnose and quarantine before the development of an infection, but the simple, efficient and radical moral means. So far as we know, this is the first time in military history in which this method has been adopted as a general policy by the military authorities of any nation and in which the machinery of military discipline has been employed on a large scale and in good faith for this purpose.

2,979 years ago, a general of good repute, even today, in commandeering food found himself up against this problem: The only available supply was the sacred bread of a small temple—or at least what other nations would so call it. The priest in charge hesitated but intimated that the military exigencies would justify the use of this supply, if, at least, the men had kept themselves from women. The general replied with pride that there had been no women available for about three days "since I came out" and this prolonged continence was satisfactory to the priest. (See I Samuel, Chapter 21, part of the narrative of David). The contrast with the modern ideal is striking and neither David nor other generals of history have considered prolonged continence on a large scale possible.

It is not the entire purpose of this article to show how much superior our military morals are to those of the past nor to those of some nations at present. Some have explained certain atrocities, marked by non-professional mastectomy as due to the prohibition of soldiers already infected with venereal diseases, from applying to regularly licensed female camp followers, or even of leaving their own victims capable of conveying disease to comrades of the same army. What we wish to emphasize is the tremendous difficulty of effectively carrying out in practice, the theoretically ideal means of venereal prophylaxis to which we are committed. This is shown by previous military experience for centuries, by a knowledge of human frailty which it is the merest hypocrisy to pretend that we do not possess, by current statistics which show that the ideal method has failed within a very brief period, so brief as to warrant considerable scepticism of success after the lapse of a sufficient time to allow the development.of severe sexual hunger. Expressed arithmetically, the problem is to reduce an existing and fairly well established annual rate of somewhere between 50 and 150, not to include extreme limits in either direction, to zero, in a total of 2,000,000 according to present estimates of our military force in the near future. We have purposely stated the problem in abstract rather than concrete numbers because many persons consider it an indication of personal probity to express views regarding the venereal problem which they would not think of doing with regard to any other. Such a course is neither scientific nor ultimately moral for the simple reason that it is not truthful. Suppose, for example, we conceded that the 100 grams of fat that most persons ingest daily could perfectly well be reduced to zero—and there is a good scientific argument for this contention. This does not imply that 2,000,000 persons will voluntarily subject themselves to a fat-free ration. The experience of Germany with regard to fats well illustrates the difficulty of the problem.

Suppose that the method of venereal prophylaxis to which we are committed does fail—or rather, in the light of actual adverse reports from encampments under far more favorable conditions than can be maintained merely on account of the effects of lapse of time alone—let us be honest enough to say: suppose this method keeps on failing, what are we going to do? Are we going to act as in the case of typhoid, use all possible methods of prophylaxis and then of therapeutics in case of ultimate failure or are we going to stake everything on the one ideal method?

Civil Practice.

In these times, there is a tendency to emphasize details of military medicine and especially of war surgery. Without minimizing the importance of these matters and without posing as a prophet, let us not forget that no previous war on such a scale as to draw heavily on the population, has ever lasted for a considerable period as compared with the periods of peace. We need not raise the question as to whether this will or will not be the final great war. Let us not forget the numerically greater incidence at present of non-military affections nor overlook the harm of neglecting interest in the routine problems of practice among a peaceful population.

Post Bellum Problems.
Physical, Mental and Moral Repair Work.

The raising of a large army from civilians has given us a good idea of the proportionately small but numerically enormous number of individuals who are, in one way or another defective. The training of those accepted, even provisionally has quite successfully repaired many of these defects, has shown the precautions as to branch of service or line of peace work within the ability of the partially disabled, as well as the hygienic and sociologic training and guarding also necessary. Not to mention tuberculosis, mainly in arrested or at least arrestable forms; hernias, piles, club feet, decayed teeth, adenoids, visual defects and the venereal diseases with which medical readers are familiar, the 1% or so of mental defectives who can be made fairly useful and kept fairly healthy and happy or who can become tramps,—and the lesson as to prostitutes is equally plain by inference and indirect military experience—are now a well understood problem for state care.

It is said that considerably more than half a million illiterates have been found and as the rudimentary English education of all soldiers has long been part of the military training, definitely provided for in Army Regulations, this defect will be well on the way to correction before the illiterate sails for France. In this connection, it may be said that a good deal of the trouble with pacifists of the lower grade has been found to be ignorance, often combined with actual illiteracy, though the ignorance is in regard to general information and inability to reason, rather than primary school studies. This type of pacifist is, as a rule, a well meaning, moral, religious, hard working boy but with very limited literal geographic and figurative intellectual horizons. What views they do hold, have been gained from teachers and other leaders a generation or two behind the times in conceptions of every kind, including the very practical present conception of the interrelationship of all nations of the globe. In a surprising number of instances, they scarcely realize that there is a war, or that it can by any possibility affect them or even the country. Having been limited to a ten-mile radius of movement, they think of 3500 miles as we do of interplanetary space. They cannot visualize or comprehend the man power of millions from an acquaintance of a few hundreds, nor the mechanic power and danger of modern military machinery from the feeble fire-arms, and simple hand-turned and horse-drawn implements with which they are familiar. The sophistries on which they have been brought up have never been measured against the straight edge of modern logic. A considerable number of these conscientious objectors need only a few weeks' association with well informed, keen minded youths to become aroused and to realize where they stand as American citizens

So much has been said as to the morals of our army, in a restricted sense, that we need not dwell on this phase of the subject. There is such a thing as compulsory morality just as there is compulsory education. It does not go very far, but it tides over a period at least. Morality in a broader sense depends largely on discipline and while most of us may dislike discipline and especially in military dosage, it has its advantages.

To a large degree, those subjected to the various forms of repair work, are able to pass along to others, after the war, either the general fact that it is necessary and can be done, or in some simple particulars, can actually put it into execution. But, for the most part, the work to be of permanent and general value, must be taken over by some branch of the government outside of the military establishment. In an advisory and, in many ways, a direct capacity, the medical profession must play an active part.

Air Space.

While the long established rule of 1000 cubic feet of air space per capita, approximately equal in its three dimensions, still holds good, we have come to realize rather recently, that air allotment involves a factor quite independent of and perhaps much more important than a provision for oxygen and the dissipation of carbon dioxid and other more toxic but practically unknown emanations. This factor is the necessity of air space to allow dilution of infectious organisms and thus diminish the danger of conveyance of disease. By the law of chance, one man in a room of the size mentioned is considerably safer than two in a room twice as large, or of 30 in a room 30 times as large. The general principle applies to persons in health—meaning, when any considerable number are gathered together, that some will be carriers of germs to which they have not succumbed—and even more strongly to collections of persons some of whom have more or less contagious diseases, whether of the same or, a fortiori, of different kinds. Screens, sheets or even newspapers hung between beds or dormitories or hospital wards obviously increase the factor of safety, without actually increasing air space but. up to the point at which ventilation and opportunities for sedimentation from the air and dilution of virus become practically as great as out doors, segregation by as small units as practicable, is more important than increase of air space. Even being out doors is not necessarily a guarantee of freedom from danger.

This is a point which has required not so much experiment and experience as realization. It is of both civil and military importance.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

On the Fringe of the Great Fight, by Colonel George G. Nasmith, C. M. G. George H. Doran Co., Publishers, 244 Madison Ave., New York City. Price, $1.50.

This book tells of some of the experiences of the first Canadian Contingent. The narrative starts at the first training camp at Valcartier and further tells of the camp on Salisbury Plains in England and trench warfare in France. Physicians will find the detailed account of the mobile laboratory work especially fascinating, and will be surprised at the vast field of this department.

The author's fine sense of humor and splendid literary style, plus his scientific training, make this book one of the best war accounts published to date.

The Medical Clinics of North America. Volume 1. Number 6. (The Southern Number, May 1918). Octavo of 224 pages, 35 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published Bi-Monthly. Price, per year: Paper, $10.00; Cloth, $14.00.

This number is the sixth of the first volume, and is designated the Southern Number because the contributors are all representative practitioners of the Southern States. It consists of thirteen papers and while original research has been given a prominent place, the clinical subjects have by no means been neglected. Besides a general survey of the progress in pneumonias and tuberculosis, malaria is presented by an authority of large experience so that the knowledge imparted is more valuable than from the pen of a less experienced writer of the North. The careful paper on the study of ten pellagrins in two families living in the same neighborhood suggests the importance of considering the disease to be an infectious one.

A review of the index to the first volume of these clinics contains many reasons why these valuable publications should continue. The five previous numbers were named respectively the John's Hopkins number, the Philadelphia number, the New York number, the Boston number, and the Chicago number. All the articles upon timely subjects contributed are by some of our best known medical authors.

The Hodgen Wire Cradle Extension Suspension Splint. (The Exemplification of this Splint in the Treatment of Fractures and Wounds of the Extremities and Its Application in both Civil and War Practice). By Frank G. Nifong, M. D., F. A. C. S. With an Introduction by Harvey G. Mudd, M. D., F. A. C. S. Cloth, 162 pages, 124 illustrations. Price, $3.00. C. V. Mosby Company, St. Louis, 1918.

This small book opens with an introduction by Dr. Mudd, who feelingly writes of the life and works of John Thompson Hodgen, a man of unusual professional ability. He states that during the Civil War Hodgen's ingenuity combined the valuable features of the Nathan Ryno Smith and the Gurdon Buck suspense splints and produced his suspension splint that bears his name. While this brochure is supposedly limited to a discussion of The Hodgen Wire Cradle Suspension Splint it really devotes quite 100 pages to methods of splinting.

The author describes in detail many of the newer as well as the older forms of suspension and extension treatment of fractures. The book is freely illustrated adding greatly to the value of the text in that they accurately show important details. Treatment is given great consideration and none of the minutia that leads to a successful result are thought by the author too unimportant to describe. Furthermore, great stress is justly and wisely laid upon traction and extension as very important measures in certain types of injury. The monograph should be on the bookshelves of every up-to-date surgeon.

Naval Hygiene. By James Chambers Pryor, A. M., M. D. Medical Inspector, United States Navy; Master of Arts in Hygiene, Johns Hopkins University; Head of Department of Hygiene, U. S. Naval Medical School; Professor of Preventive Medicine, George Washington University. Cloth. Price, $3.00 net. Pp. 507, with 153 illustrations. Philadelphia: P. Blakiston's Son & Co.

Naval hygiene should be of special interest to the many doctors who today have enrolled for duty "on the trackless seas" as their "bit" of patriotism and loyalty, most of whom are totally ignorant of naval training and discipline. The author writes from the experience of years of naval service in all parts of the world and he hopes to make the way of the sea easier for others to comprehend. The comments on volunteers leaving ordinary civil land occupations and plunging into totally different surroundings are quite to the point. The author has set before us in a pleasing manner those essentials of Naval Hygiene which he considers will be of most value to physicians. He has stripped all irrelevant matter from the text and has written a compact, easily handled book. The greater number of illustrations almost without exception are splendid, well arranged and aptly illustrative of the point. The book contains much information that would enlighten even lay readers about the care of the health and wellbeing of the "tars" of "Uncle Sam." It would interest the thousands who have sons in our Navy. The book is well printed and free from typographical errors and is an excellent production of both printer and binder.

Gynecology. By William P. Graves, M. D., Professor of Gynecology at Harvard Medical School. Second Edition, Thoroughly Revised. Octavo volume of 883 pages with 490 original illustrations, 100 of them in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $7.75 net.

To those of the medical profession familiar with the first edition the second edition of this valuable contribution to surgical literature needs no introduction. The work is designed both as a text-book and as a general reference book on the subpect of Gynecology. The estimable classification into three distinct parts is still retained. The subject matter has been brought down to date and includes a section on the Freudian theories of sex relation and its bearing on gynecological conditions. There have been many modifications in the text and several important revisions and additions have been made dealing with the relationship of gynecology to the internal secretions, the radium treatment of cancer, the radium therapy in non-malignant gynecologic diseases. In that part of the book devoted to operative gynecology a number of new operations have been described and illustrated. In fact, the illustrations which have been improved and which have been increased in number should be specially mentioned for they are extremely well executed by the well known artists Margaret Concree and Ruth Huetic. The gynecologist by studying them will be able critically to review his methods and results; while to the practitioner and student an opportunity is offered to consider the origin of the pathologic processes, the indications for operation and the well-advised management of gynecological diseases.

The volume is written in a style so simple and so clear that aside from its worth as a text-book, its perusal is distinctly a pleasure; it will be found of equal value to the practicing physician and to the expert gynecologist; its ownership is highly recommended to all practitioners whose practice requires a familiarity with conditions peculiar to woman.

Nursing in Diseases of Children. By Carl G. Leo-Wolf, M. D, Chief of Clinic for Sick Babies and Children for the Health Department of the City of Buffalo, N. Y.; Instructor in Pediatrics, University of Buffalo, Medical Department; Author of "The Child in Health and Illness." Cloth, 314 pages, with 72 illustrations. Price, $2.50. St. Louis, C. V. Mosby Co., 1918.

The reviewer welcomes a book by a Buffalo author. Although it is written as a text-book for trained nurses it could fill an important place in disseminating knowledge in Nursing Children in Disease among mothers and even among physicians. The nurse who studies and retains the information found between the covers of this readable book would not only be better informed, but would be quite sure to be a greater help to the physician who often neglects the many important minor details in the conduct of the child's welfare.

The book opens in a short introductory chapter with a clear, simple exposition of the metric system of weights and measures which causes the nurse so much difficulty. Therein the author treats another perplexing problem of the nurse, that is the elements composing our foods and their caloric values.

The second chapter treats of the physiology of the child and discusses general considerations of the care of the child in such a manner as to simplify for the nurse the study of the development of the babe, infant and child. The section on feeding of children, disturbances of nutrition, and, diseases caused by malnutrition may well be commended not alone to the nurse but as well to the physician.

The chapter on clothing of the baby is a contribution by Miss M. J. Robertson, R. N., who has handled this trying subject with brevity and care, the tenor being toward simplicity in dress. The chapter on Public Health Nursing of Children, by Mrs. A. L. Hansen, R. N., who has treated the subject well, is most too brief.

The chapter on Mental Hygiene of Children is from the pen of H. G. Matzinger, M. D. This extremely important subject deserves special consideration by the reader. It alone would repay every parent to read this chapter as a guide to development and to character building of the child.

Instead of a careful compilation, the book, in the main, presents the most recent accredited information upon the various topics considered which treatment is quite apart from the personal touch from the ample experience of the author.

The author's style is conversational and familiar rather than the usual stilted and severely dignified one of the textbook, which in all makes this little work very readable.

Surgical Treatment. A Practical Treatise on the Therapy of Surgical Diseases for the use of Practitioners and Students of Surgery. By James Peter Warbasse, M. D., Formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, New York. In three large octavo volumes, and separate Desk Index Volume. Volume I contains 947 pages with 699 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Per set (Three Volumes and the Index Volume): Cloth, $30.00 per set.

The author states in his preface that the three volumes of the work of which this is the first have been prepared primarily to "place in the hands of the surgeon the means for rendering help in every surgical condition under all circumstances" with the interest of the surgical patient always first in mind and to whom the work is dedicated. Every department is presented; not only general surgery, but special surgery. The brain, eye, nose, throat, skin, gynecology, genito-urinary, cosmetic, emergency surgery, minor surgery and bandaging. For the benefit of the medical student and general practitioner, he has purposely omitted all theoretical considerations presenting only essential and accepted facts in diagnosis and treatment.

The author states that as the work is written wholly by a single individual many other books have been consulted in its preparation, however he has not blindly followed the statements of other authors as is so often done in medical literature; whenever a method is described or considered that is still debatable the arguments are given but they are followed by the author's personal views.

The first volume is very broad in its scope; a discussion of the general principles of surgical treatment and surgical materials are first given. These chapters are along original lines in text-book composition and they will be of inestimable value, as they embrace the latest views of asepsis and antisepsis, anesthesia and anesthetics.

The chapter on "wounds and operations" discusses the various forms and their treatment sufficiently comprehensively. The chapter on "surgical fevers and infections" is thorough and very readable. The excellence of these chapters is but an index to the other chapters of this volume and demonstrate it to be one of the most valuable contributions to surgical literature.

The 2400 illustrations in the work are reproductions of photographs and clear drawings are used where photographs would be confusing. The illustrations add a great deal to the value of the work; they have been especially selected by the author and are well reproduced by the press work.

The thought in one's mind as he inspects the work is that in the preparation of it there must be a lack of originality but this is soon dispelled. The work has entailed an enormous amount of labor upon the author and too much credit cannot be given for the indefatigable energy with which the author has perused his task in the first volume in presenting the diversified material in so orderly a way.

Principles and Practice of Infant Feeding. By Julius H. Hess, M. D., Major M. R. C., U. S. Army, Active Service. Professor and Head of the Department of Pediatrics, University of Illinois College of Medicine; Chief of Pediatric Staff, Cook County Hospital; Attending Pediatrician to Cook County, Michael Reese and Englewood Hospitals, Chicago. Cloth, 338 pages, illustrated. Philadelphia: F. A. Davis Company, Publishers. English Depot, Stanley Phillips, London, 1918.

In this volume the author has given us a thoroughly scientific and up-to-date little book on the feeding of infants. Beginning with a chapter on metabolism he variously takes us through the care of the nursing infant, the premature infant, and finally the simple, rational feeding of milk mixtures according to tolerance. He then outlines the nutritional disturbances following the classification of Finkelstein and Czerny; this classification is the one now generally accepted and its appearance in this book marks the first in the English language to be well presented. Last, but not least, he points out the important relationship between infection and nutrition. It is an admirable book for both student and practitioner.

The Orthopedic Treatment of Gunshot Injuries, by Leo Mayer, M. D., Instructor in Orthopedic Surgery, New York Postgraduate Medical School and Hospital, with an introduction by Col. E. G. Brackett, M. C. N. A. Director of Military Orthopedic Surgery. 12mo of 250 pages, with 184 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $2.50 net.

This little monograph brought out by the present great war has an introduction from the pen of Col. E. G. Brackett, M. C. N. A., who sets forth the marked value and usefulness of a work of this kind.

The author states that the book is not a treatise on orthopedic surgery, its purpose being "merely to emphasize certain principles and rules of guidance in the treatment of war injuries." Three years of military experience have given the author the opportunity to speak with some authority.

The book has the merit of great brevity without any loss of clarity or usefulness. With the aid of photographs and drawings the author emphasizes the importance of methods of treatment which will aid the surgeon as well as the specialist. This brief, very readable and instructive work should be carefully studied by all those whose medical duties will send them to cantonments or to the hospitals and stations back of the fighting lines.

TOPICS OF PUBLIC INTEREST

German Births were reduced from 1,839,000 in 1913 to 1,103,000 in 1917, respectively 27 and 16.5 per 1000 of the antebellum population of 67,000,000. As we have suggested, it is not improbable that the war will deplete the European population even more in the young and old than in the men of military age.

It is Estimated that 7,600,000 Gallons of Gas will be saved each Sunday while the ban on Sunday auto riding continues.

Major Charles A. Reed, M. R. C., conducted a short campaign for enlistment of doctors in the Medical Reserve Corps for Erie County. Erie County has been 69 below its quota but as the results of the lectures 65 physicians have qualified and now await call.

The War Department states that of the American soldiers wounded in the Marne-Aisne offensive and sent to hospitals, 1 in 20 die. That of all the soldiers sent to the hospitals only 45 in every 1,000 die. That more than four-fifths return to service. That 14.5 per cent are discharged for disability.

Army Surgeons have discovered a means to combat Empyema, a strange disease of the lungs that assumed the proportions of an epidemic in many cantonments last winter.

The form of the disease that appeared in the camps last winter differed from the ordinary disease seen in civil life, being due to the streptococcus, one of the most dreaded germs known.

Empyema is an infection that attacks the membrane covering the lungs or the membranous lining of the chest walls. It produces a fluid, oftentimes pus, which remains between the two membranes. The amount of the exudate constantly increases and the lungs are forced up into a smaller and smaller space as the fluid tends to fill the pleural cavity. During this stage of the disease breathing becomes more labored and difficult, due to the restricted air space in the lungs. Aside from this aspect of empyema, which alone may prove fatal, the virulence of the germ is such that the infection is always to be dreaded.

While similar epidemics have ravaged all armies for the last three centuries, at no time has the cause been known. The first known operation for empyema was performed in a similar epidemic during our War of 1812.

A Health Rate, which as far as known has never been surpassed, has been established by the American Armies both here and overseas. For the week ended July 26 the combined reports of the American Expeditionary Forces and of troops stationed in the United States show an annual death rate of disease of 1.9 per 1,000—less than 2 men per 1,000 per year. The annual death rate for disease of men of military age in civil life is 6.7 per 1,000. This new rate is based on an approximate strength of 2,500,000 men, and includes men living under abnormal conditions.

Surgeon General Gorgas has called for 1,000 graduate nurses a week—8,000 by October 1. 25,000 graduate nurses must be in war service by January 1—in the Army Nurse Corps, in the Navy Nurse Corps, in the U. S. Public Health Service in Red Cross war nursing. This involves withdrawal of many nurses from civilian practice and necessitates strict economy in the use of all who remain in the communities. You can help get these nurses for our sick and wounded by: Relieving nurses where possible wholly or in part from office duty. Seeing to it that nurses are employed only in cases requiring skilled attendance. Insisting that nurses be released as soon as need for their professional service is ended. Seeing that your patients use hospitals instead of monopolizing the entire time of a single nurse.

A Five Million Army Means Fifty Thousand Medical Officers. With an army of three million men in the field or in training and as contemplated, an expansion of this force to five million men, the Surgeon General must have in the Medical Reserve Corps at least fifty thousand doctors.

The Medical Corps must keep a pace in growth with the army expansion and it behooves every doctor in the United States between the age of 21 and 55, who is physically morally and professionally fitted, to arrange at the earliest possible moment, his personal affairs so as to offer his services to his country in the capacity of a medical officer.

The United States is in the war to do her part in winning the struggle and this can only be accomplished by a large and well trained body of troops adequately cared for by sufficient number of medical officers. The importance of the doctor's service and its relation to the successful outcome of the war cannot be under-estimated.

As the mobile forces increase in size, so is there an expansion of Base Hospitals and other Institutions for the care of the sick and wounded and there should be no lack of officers when required to give to our patriotic boys, the professional attention which is so essential.

It is well for the medical profession of the United States to realize at once that a Medical Reserve Corps of at least 50,000 doctors will be required to meet the demands of the Surgeon General and upon which Corps he can draw for his medical officers.

We believe by this time that the profession of this country must be fully alive to the needs of the Service, so let every doctor who is qualified, feel that he is doing not only his patriotic duty in offering his services as a medical officer, but is relieving the tension of the Surgeon General's Office by placing at the command of the Chief Officer of the Medical Department an adequate force without the frequent beating of drums to supply the necessary number with each increase of the mobile forces.

If you have not already received an application blank for commission in the Medical Reserve Corps, your nearest Examination Board or the Editor of this journal will be glad to supply you.

Miss Anna G. McCrady and five other nurses of the Ft. Porter Base Hospital left for overseas service about Aug. 1, forming part of a psychiatric unit of 40. News of this movement was withheld till too late for our Sept. issue.

Volunteers for the M. R. C. Still Needed. The announcement that no further candidates for officers' training camps would be taken from civil life has, very naturally, been understood to apply to all. As a matter of fact volunteers for medical commissions are not only acceptable but are urgently needed to make up the average of 1% of the total number of troops. At least 5,000 physicians are required for forces already inducted or who will be in the very near future. The editor can personally vouch for the fact that averages of 50 physical examinations or of 100 patients per physician are maintained almost constantly at various places. Medical military work can not be evenly adjusted but there is no favoritism in the distribution of hard assignments. If anything, the hardest work is done by the members of the regular army medical corps and by those of the higher ranks. The medical profession should appreciate the fact that the only way in which the overwork of their military confreres can be reduced is by a generous response to the call for more volunteers.

Automobiles numbered 404,247 for the state, 4,810,917 for the country in 1917; 421,084 for the state, 5,461,791 for the country on June 1, 1918. The average increase was 15%, the percentages varying so as to show that certain states are very close to the necessary supply, while others are increasing rapidly up to approximately the same per capita basis. For example, Massachusetts increased only 1%, N. Y. 4%, while F. Va. and N. J. increased 47%.

The War Department announces that a gold chevron of standard material and design will be worn on the lower half of the left sleeve of all uniform coats, except fatigue coats, by each officer, field clerk, and enlisted man who has served six months in a theater of operations during the present war as an officer, field clerk, or enlisted man of the armies of the United States, and an additional gold chevron for each six months of similar service thereafter. And that a gold chevron of pattern identical with that of the war service chevron, to be worn on the lower half of the right sleeve of all uniform coats for wounds received. Disablement by gas necessitating treatment by a medical officer shall be considered to be a wound within the meaning of this order.

Sugar. Since the Government has been handling the purchase of sugar, through the United States Food Administration (Sept. 1, 1917), approximately 200,000,000 pounds have been used by the Army. This amount is exclusive of the depots and camps on the western coast, which have been using raw sugar from Manila, having it refined in the West. A conservative statement of the amount of sugar procured on the Pacific coast is about 25,000,000 pounds, making the total purchase for the Army 225,000,000 pounds. It is found that about 237 pounds of sugar are consumed by 1,000 men at their meals in one day.

Chiropodists. As far as is consistent with the military demands, chiropodists taken into the Army will be transferred to the Medical Department and either assigned directly to the various camps for duty under the camp surgeon or first sent to Camp Greenleaf for further training under the regular orthopedic instructors. On the demonstration of proper skill and attainments they may be advanced to the grade of sergeant. A canvass of the camps is now being made to determine the need of this particular service.

Nutrition Officers are to be stationed in every National Army cantonment and every National Guard camp, as well as in every camp where 10,000 or more soldiers are in training. These officers are food specialists who before they joined the Army as members of the Medical Department were connected with colleges and public bodies as physiologists, chemists, economists, food inspectors, and experts in other specialized work relating to food.

Corps of Doctors and Trainers. For the care and conditioning of fliers in the Air Service the United States Government is now appointing a corps of doctors and trainers large enough to equip each training field and camp for fliers, both here in the United States and in France, with a proper organization. The doctors will be known as flight surgeons and the trainers as physical directors. The medical branch of the Air Service is not alone confined to the selection of the flier but to his care and condition after he has been admitted to the service.

Government Insurance. More than $30,000,000,000 of Government insurance has been written to date to protect America's fighting forces and their families, Secretary Mc-

Adoo announces. Approximately 3,400,000 insurance applications have been received by the Bureau of War-Risk Insurance of the Treasury Department up to the close of business August 30.

Provision for Wounded From Europe. Debarcation and other hospitals have been provided to accommodate 90,000, with increase to 100,000 by slight crowding. As a quarter of casualties consist of deaths and as somewhere near 80% of the wounded may be expected to return to the fighting line after treatment in overseas hospitals, these numbers correspond to a total casualty list of about 1½ million, 50 times the aggregate at the end of the first week of Sept.

French Military Statistics. It is estimated that France has lost a million soldiers by death and another million by permanent crippling, there remaining a force of 4¾ million. Typhoid morbidity has fallen from 7:1000 in Dec. 1914 and Jan. 1915, to 0.1-0.06:1000. The annual mortality rate from typhoid has fallen from 98:100,000 in 1914 to 0.3 in 1917. Venereal admissions have fallen from 21 to 14:1000. The mortality of the wounded in the recent Aisne offensive was 5.18% although 20% were considered too severely wounded to be transported to the base.

American Casualties. The total casualties of the American Expeditionary Force to Sept. 7 were just over 30,000, about what the British army of about 2 million has suffered per week on the average, since the beginning of the German drive in March. In some respects, the distribution of casualties is considerably different from what might be expected, from present experience in other forces and from past experience in general. We have previously called attention to the fact that while in all the wars of history up to the Russo-Japanese War, deaths from disease have exceeded those from fighting, the ratio being about 2:1 for the Civil War and as high as 10:1 in many campaigns of earlier date, all the enlightened nations of the present conflict have maintained a disease mortality if anything less than what would be expected in peace for the same adult male class. Our own deaths from this cause are only 325. Owing to the gradually increasing numbers of the force and the different periods for which each increment has been a part of the force, it is impossible to calculate a death rate. Accidents, inevitable to and really forming an indirect item of military losses, have caused 789 deaths. The actual military fatalities, no attempt being made to differentiate between immediate killing and deaths from wounds, total 7,662, almost exactly 24.5% of the casualties.

Missing in action, including prisoners and unnoted deaths and some others, number 3,424. These statistics show definitive losses, up to delayed deaths from wounds and permanent military disability, of 40% which is about the average of all definitive losses according to recent military experience. The high and low claims by other countries of return of wounded to duty, 90-80%, would make our definitive losses, respectively slightly under and slightly over 50% of the total casualties. Most of those whom we have asked as to an explanation of this high percentage of definitive losses have said that it was due to the lack of caution of inexperienced troops. But imprudence would increase the number of missing, especially prisoners and, by the law of chance, would increase the number of slight wounds at least as much as the fatal ones. The only explanation that occurs to us is that American soldiers continue fighting after receiving their first wounds, until they are killed or more severely wounded.

National Taxes, will amount to nearly $80 per capita in the present year of the war, beside about $200 per capita to be raised from bonds and war savings stamps. Ordinarily, the national government spends about $10 per capita.

Opening for Nurses in State Hospitals. About 6000 nurses are employed in the State (Insane) Hospitals of N. Y., to care for about 37,000 patients. Many nurses have entered the government service and it is possible that the clientele of the hospitals may be increased by the admission of patients from the army, as all citizens of the state are to be admitted from military and naval service, if so desired by the military authorities. Hence the State Hospital Commission has provided for the admission of 1000 young women to state hospitals for training from permanent positions. Application should be made to the Commission at Albany. Male students exempt from military service will also be taken. Perquisites and salaries will render the students self-supporting.

Economizing Nurses' Services. The Buffalo District Nursing Association will hereafter, limit the duties of its nurses to strictly professional care, such services as washing and combing hair, arranging trays, etc., being left to members of the family, subject to instruction. The aim is to release more nurses for military service.

British Physicians living in the U. S. are urgently called by the Canadian government to volunteer for service. Degrees from medical schools of the United States will be honored and commissions will be issued immediately. Those in this locality should apply to Capt. A. Cunningham Tweedie, 333 Main St., Buffalo.

Ambulance Wrecked. The Buffalo Homoeopathic Hospital ambulance was wrecked in a collision with an automobile Sept. 7. No one was injured.

Commissions for Women Physicians. Of interest to all women of this country is the news that three American women physicians have received lieutenants' commissions in the French army and are the first American women to obtain army rank. They are Dr. Caroline Finley, Dr. Anna von Sholly and Dr. Mary Lee Edward, all of New York, and attached as surgeons to the military unit of the women's oversea hospitals, financed and managed by the National American Women Suffrage Association. The women received decorations from the French government for excellent surgical work recently performed under heavy bombardment, and after that, their commissions.

Stenographers and Typewriters Wanted. The U. S. Government still needs many workers in these lines. Examinations are held every Tuesday in 550 cities. Most of the employment will be in Washington. The government has taken steps to remedy the high charges for room and board by listing boarding houses and building residence halls with cafetarias. Two persons rooming together can secure room and two meals a day for about $40 a month. The pay is liberal. For further information address John A. McIlhenny, President U. S. Civil Service Commission, Washington, D. C.

Antiseptic Formula for Gas Bacillus Infection. Maj. James T. Pilcher, of Brooklyn, now at a base hospital at Auteuil near Paris, has had excellent results from the following, used exactly like Dakin solution. Quinine sulphate 1, HCl 0.5, Glacial acetic acid 5, NoCl 17.50, Thymol 0.25, Formol 1, Alcohol 15, Water up to 1000. The quinine is dissolved in the two acids, the thymol in the alcohol, the salt and formol in the water, before mixing. The solution is practically permanent, has been tested in the worst possible cases of comminuted fracture, and has superseded the less permanent Dakin solution in this hospital.

Spanish Influenza. It is reported that there were on September 25, 29,002 cases of so-called Spanish influenza in various army camps. Fifteen camps and stations had no cases.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

The Livingston Co. Medical Society met at the Colonial Hospital at Dansville, Aug. 16. Dr. Shaw of Craig Colony was elected president, Dr. Wicker of Livonia vice-president, Dr. Collier of Craig Colony Sec. and Treas. The society has eight men in military service. The guests were entertained by the Dansville members.

The first meeting of the season of the **Western New York Medical Society** was held in Buffalo.. Dr. Lyman C. Lewis, secretary, resigned his office to join the army. Dr. Wm. E. Britt of Tonawanda was appointed to succeed him. The speakers were Major A. E. Brownrigg, commandant at For. Porter and Dr. Floyd M. Crandall of New York.

The thirteenth annual meeting of the **Eighth District Branch** of the New York State Medical Society was held in Buffalo. Dr. Albert T. Lytle, the president, addressed the meeting.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. DeWitt H. Sherman of Buffalo visited in Shinnecock and Stockbridge, Mass., in August.

Dr. Edgar A. Forsyth of Buffalo motored through the Adirondacks late in August.

Dr. R. I. Palmer of Silver Creek has resigned from the local board of education of which he was president.

Dr. J. W. Fitz-Gerald of Buffalo spent August in Georgian Bay.

Dr. M. M. Cole of Newfane has accepted the position as assistant physician at the Soldiers' Home in Bath.

MILITARY PERSONALS

Dr. Francis M. O'Gorman who has received the commission of Captain in the M. R. C. and who has orders to report to a camp in Alabama this month, was given a dinner of 40 places at the Weyand Cafe in Buffalo.

Maj. William G. Bissell of the 65th regiment of the state guard has been appointed by Adjutant General Sherrill as instructor in hygiene, first aid and sanitation at the instruction camp for officers of the state guard to be held at Camp Whitman the first two weeks of September.

Dr. Ross Nairn has been commissioned Captain in the M. R. C. and Drs. Glenn Arthurs, John Finnegan, Howard Ludwig and Walter Zielinski were given Lieutenants' commissions.

To Camp Custer, Maj. T. H. McKee, Buffalo.

To Camp Devens, Lieuts. J. P. Jeffman, Buffalo; R. D. Richman, Morton.

To Camp Dodge, Capt. K. E. Williams, Rome.

To Camp Jackson, Capt. M. E. Leary, Rochester.

To Camp Jos. E. Johnston, Lieut. D. J. Tillen, Elmira.

To Camp McClellan, Capt. F. M. O'Gorman, Buffalo.

To Camp Meade, Capt. T. I. Townsend, Binghamton.

To Fort Des Moines, Major T. Wright, Buffalo.

To Fort Ontario, Lieut. W. L. Wooden, Clifton Springs.

To Lakewood, N. J., Capt. J. B. Ringland, Oswego.

To New Haven, Conn., Lieut. D. Yunj, Buffalo.

To Plattsburg Barracks, Capt. J. G. Stowe, Buffalo.

To Rockefeller Institute, Capt. W. M. Halsey, Oswego.

To Washington, Capt. H. L. Raymond, Collins; Major J. R. Gaylord, Buffalo.

To Wichita Falls, Texas, Capt. S. A. Munford, Ithaca.

Honorably discharged on account of physical disability existing prior to entrance into service, Capt. F. W. Filsinger, Buffalo; Capt. W. J. Aubry, Cohoes.

To Camp Crane, Capt. J. C. Davis, Rochester.

To Camp Gordon, Lieut. T. L. McNamara, Corning.

To Camp Hancock, Capt. C. O. Sayres, Rochester.

To Fort Oglethorpe, Lieuts. R. L. Cooley, E. J. Ludwig, J. E. Trudnowski, Buffalo; Capt. F. S. Winslow, Rochester; Lieuts. J. E. Wright, Menden; J. B. Deuel, Rochester.

To Camp Dix, Lieut. C. S. Laird, Westfield.

To Camp Green, Capt. F. W. Kennedy, Rochester.

To Camp Sevier, Capt. G. S. Skiff, Gainesville.

To Camp Shelby, Lieut. S. D. Earhart, Clifton Springs.

To Camp Wadsworth, Lieut. F. M. Kujawa, Buffalo.

To Fort Benjamin Harrison, Capt. Ross Nairn, Buffalo; Lieut. H. G. Hotchkiss, Rochester.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Marion Eugene Martin, Attica, N. Y.; Buffalo, N. Y., University, 1892; aged 54; a Fellow of the American Medical Association; for several years coroner of Wyoming County; died at his home, August 14, from heart disease.

William Henry Mason, Stockton, Calif.; Albany (N. Y.) Medical College, 1911; aged 33; radiologist at the Stockton State Hospital; died at his home in that institution, Aug. 20.

Dr. David Everett Wheeler of Buffalo was killed Aug. 13 while attending the wounded under fire. He graduated at the College of Physicians and Surgeons of N. Y. (Columbia) in 1898 and was about 46 years old. He went to Europe as a Red Cross worker in the first year of the war, enlisted in the Foreign Legion of France Feb. 15, 1917 and was wounded in the leg in the Champagne battle, Sept. 28. While crawling to the rear, he stopped to minister to others and was awarded the Croix de Guerre for heroism. Later he entered the Canadian Army as Captain and was transferred to the U. S. Army on our entrance into the war. He was later made a regimental surgeon with rank of Major. Before the war, his adventurous spirit led him to make several hunting trips in the far north.

Dr. Edward W. Bryan of Corning died August 24th, age 85. He graduated from the Cleveland Medical School in 1873.

ABSTRACTS

Frequency and Significance of Left and Right Diastolic Murmurs. Presse Med., Aug. 9, 1917. In young subjects, the murmur of aortic insufficiency is heard more often in the 3d space, to the left, than in the classic position, the 2d right space. As corroborated by radioscopy, the left sided murmur corresponds to a recent lesion, with simple hypertrophy of the left ventricle and a vertical direction of the aorta. In right sided murmurs, the lesion is old, the ventricular hypertrophy is associated with dilatation of the right cavities and the aortic axis inclines from below, to the left, to above, to the right.

Contents, Page 5. Index to Advertisements, Page 6. Publicity Dept., Page 20

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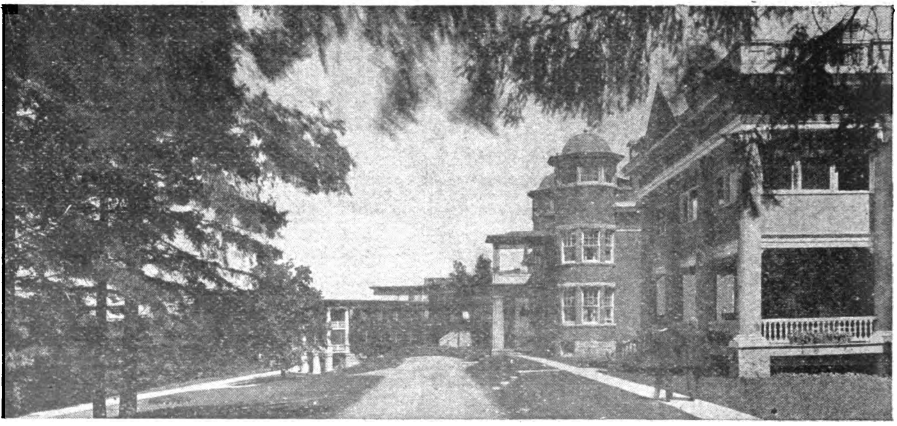

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CONTENTS FOR NOVEMBER, 1918

Original Articles

Dietetic Malnutrition in Infants and Its Treatment. By Frank Brundage, M. D., Buffalo, N. Y. 119
Notes on Poisoning in the Coal Tar Industries. By Dr. F. G. Mohlau, Buffalo N. Y. 126

Editorial

Recent Legislation 129
When Johnny Comes Marching Home 131
The Milch Goat 134
Conservation 135

Book Reviews 137
Society Meetings 139
Topics of Public Interest 140
Personals 147
Military Personals 148
Obituary 149
Abstracts at end of original articles, on advertising pages and 150

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INDEX TO ADVERTISEMENTS

Manufacturers of Drugs, etc.

Battle & Co. ... 24
Bayer ... 8
Breitenbach Co. ... 17
Bristol-Meyers Co. ... 23
Carnrick Co., G. W., New York ... 3
Daniel, John B., Inc. ... 24
Denver Chemical Co. ... 15
Dios Chemical Co. ... 7
Dugdale, Frederick ... 25
Dixson, John B. ... 5
Fairchild Bros. & Foster ... Front Cover
Farwell & Rhines ... 4
Fellows ... 18
H.-O. Co. ... Cover page 2
Katharmon Chemical Co. ... 10
Mellier Drug Co. ... 13
Mulford, H. K., Co. ... 19
Od Chemical Co. ... 11
Parke, Davis & Co. ... Cover page 4
Peacock Chemical Co. ... 16
Purdue Frederick Co. ... Cover page 3
Richardson Co. ... 11
Sherman, G. H., M. D. ... 24
Smith, Martin H. ... 12-25
Southport Chemical Co. ... 5
Sultan Drug Co. ... 22
Tilden Co. ... 9

Instruments, Prosthetic Appliances, Lenses, etc.

(Buffalo unless specified)

Davis & Geck, Inc. ... 25
Electro Surgical Instrument Co., Rochester ... 5
Fox, Geo. R., Optician ... 23
Kredo Co., Auburn, N. Y. ... 25
Storm, Katherine L., Philadelphia ... 11

Druggists

(Buffalo unless specified)

Brooks Pharmacy ... 25
Kreuz, Peter J. ... 25

Automobiles and Supplies

(Buffalo unless specified)

Eisenhans Battery Exchange ... 25
Emery Mfg. Co., Bradford, Pa. ... 25

College

University of Buffalo—Dental Dept. ... 14
University of Buffalo—Medical Dept. ... 14

Hospitals, Sanitariums, Hotels

Chalfonte, Atlantic City ... 26
Glen Springs, Watkins, N. Y. ... 26
Homewood Sanitarium, Guelph, Ont., cover page ... 2
Marshall Sanitarium, Troy, N. Y. ... 26
McMichael's, Dr. Sanatorium, Buffalo 26
Steuben Sanitarium, Hornell ... 26
Waukesha Moor Baths, Waukesha, Wis. ... 18

Milk, Etc.

(Buffalo unless specified)

Borden's Condensed Milk Co., N. Y. and Buffalo ... 12
Wheat's Ice Cream Co. ... 21

Undertakers

(Buffalo unless specified)

Sauerwein, Henry ... 4
Farnsworth, W. H. ... 4
Schlager & Son ... 4

Miscellaneous

(Buffalo unless specified)

Brainard, Harry, Insurance ... 23
Connor, R. H. & Co. ... 4
Desbecker ... 25
Samuel Newman, Tailor ... 23
Scheuermann Co., Inc. ... 12
Worthington & Sill, Insurance ... 4

Water

(Buffalo unless specified)

Hudor Co. ... 21
Creditors Commercial Corporation ... 16

Publishers

Albany Medical Annals ... 23
Detroit Medical Journal ... 21

BUFFALO MEDICAL JOURNAL

Yearly Volume 74 NOVEMBER, 1918 Number 4

ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Dietetic Malnutrition in Infants and Its Treatment.

FRANK BRUNDAGE, M. D., Asst. Pediatrist,

University of Buffalo.

In presenting for your consideration the subject of malnutrition I do not wish to disappoint your expectations for something new, either in regard to the diagnosis or treatment of the condition but rather to emphasize some important truths.

The recent contributions to our knowledge of this subject, particularly those of Finklestein and Meyer, have made a new classification of the disorders of digestion and malnutrition as described by the name of decomposition; but for the present, the term malnutrition will answer our purpose. Its occurrence is so common and its treatment so varied that a momentary review of the subject will, I hope, be productive of some good. Malnutrition is a secondary condition and not a disease, the degree of severity depending upon its cause and duration. It is characterized by a stationary or decreasing weight, a sensitive digestion, more or less anemia and an unbalanced nervous system. It occurs in both breast and bottle infants; in the former usually mild in degree but the latter running a more severe course. The primary causes are many, foremost among them being lues, tuberculosis, infectious diseases, and digestive disorders of the severe type. Of infantile malnutrition due to specific diseases it is not my intention to speak of at present but only of the malnutrition due entirely to faulty diet.

Owing to the prolonged use of proprietary foods or the unskilled use of cow's milk, by far the greater number of cases occur in the bottle fed. In the breast fed, malnutrition occurrs in about half as many cases as in the bottle fed and is here due to a diminished quantity or quality of breast milk or a disproportion of its constituents. The matter of environment, too, is often a contributary factor yet in some of the worst cases, the environment may be all that could be desired but the degree of malnutrition is severe—due entirely to diet. Further, the food may be good but its preparation bad; the quantity may be sufficiently scientific and the intervals badly judged. It is clear therefore that this malnutrition may be the result of bad quantity of milk, either a deficient or over great quantity, bad timing of feeding or ignorant methods of food preparation; or a combination of these factors. And the perplexing question is always, which of these causes or combinations has produced this condition, and again if the result of one factor, what particular element in its make up is to be suspected.

Out of 200 babies registered at one of our milk stations, 17 we classed as suffering from malnutrition, 11 of these being bottle fed and six breast fed. This includes only those cases due to dietary causes. No special food was at fault, condensed milk and Horlick's however were the worst offenders. Mellin's and Eskay's were noticeably absent, due to the fact that these are generally used with cow's milk. Cow's milk had been tried in most cases but the method and strength had been out of all proportion to the digestibility of the child; consequently the food was unsuccessful. We cannot emphasize this too strongly. Where there is a failure charged to cow's milk, the suspicion must be strong that its strength was at fault.

Heretofore we considered that the top milk method was the last word in the feeding of babies, but this is now a thing of the past and only used in special cases. Today we are convinced that simplicity is the key note; therefore the reason for giving the proprietary foods, that their preparation was easy, is no longer a justification for either use. We must admit, however, that there are many cases fed successfully on the proprietary mixtures and at times are valuable as a temporary food, but I have yet to see a dissatisfied mother after her babe has been changed to cow's milk.

There are three gradations of this condition of dietary malnutrition which I will divide clinically for the sake of clearness. First class, mild malnutrition in the breast fed. The weight is about two pounds under the average; the muscles are somewhat flabby; there is mild anemia; the child is restless and irritable. It usually occurs at three periods; at two months of age when the mother has tried to nurse and is unsuccessful, at six months of age when the breast supply naturally begins to diminish in quality and quantity and at the 14th or 15th month when the nursing is prolonged. Many of these cases develop the early symptoms of rickets, and we should constantly be on the watch. In 15 cases of rickets entered at one of our milk stations 7 were in the breast fed, due to nervous stations well predominating. The early stages of rickets in all of these cases occurred within the above periods. Therefore, it is important that we should keep this fact in mind.

Example—of breast fed malnutrition. Chas Bell, weight at birth 7 pounds and 8 ounces. Admitted to the milk station at ten weeks of age, weight 7 pounds and 14 ounces. Mother complained that the child cried constantly, was never satisfied and wanted to nurse continually. The stools were green and there was occasionally vomiting. We gave cow's milk, starting with one ounce of milk and 3 ounces of water, with the addition of one-half teaspoonful cane sugar. In two weeks the food was increased to two and one-half of milk and the same of water, with one teaspoonful sugar to each feeding. The vomiting ceased, the stools became better and we had a contented baby. At the present time the baby has gained on an average of 8 ounces each week. If this mother had given a proprietary food the result might have been disastrous. These cases tolerate milk well because there has been no great damage to the digestive system.

The second class is the moderate degree of malnutrition in the bottle fed. These babies have been fed on one or two foods for a considerable length of time, usually months. The first food not producing a satisfactory weight another is tried with the same result. The foods are ordinarily well digested and the child is fairly comfortable, yet the weight is stationary or the gain is very slight. The addition of cow's milk to the dietary of these cases is all that is necessary to get the desired result. But we must again urge the caution that all amounts be at the beginning conservative and increased as the toleration indicates. A baby moderately hungry for a day or two is far better off than one almost killed by kindness.

The third class is characterized by a constant loss of weight, anemia, flabby muscles, vomiting or diarrhoea and constant crying. Many of these cases are either luetic or tubercular but give no definite symptoms or positive reactions. These are the cases more annoying and vexing to the physician than many a contagious disease. Some do not thrive on any food but become anaemic.

Example—Baby Ford, admitted to the milk station at two months of age, weight 5 pounds and 6 ounces. The weight at birth was seven pounds. All kinds of foods had been tried.

Cow's milk was given at one month of age, half milk and half water, six ounces in all. We could not expect this strength and quality to be successful considering the digestibility of the child. It vomited the milk and had green stools, so another food was tried. There was no clinical evidence of lues, Wassermann was refused, VonPirquet was negative. Scurvy was suggested because of the apparent pain in handling the baby, especially when the diapers were changed. The treatment consisted in giving skim milk, boiled and peptonized. Later the cream was added and the peptonizing was omitted. Cane sugar was used in one-half teaspoonful to each bottle. Curds would appear in the stools and the baby showed symptoms of being distressed. The cream was removed and there was a cessation of the symptoms. When the cane sugar was increased the stools became more frequent. Dextromaltose was given in place of cane sugar but was immediately vomited. 2% cane sugar solution was then added for the regular diluent. The cereal gruels either plain or dextrinized were not tolerated, water being the most satisfactory diluent. It must be remembered, however, that in many of these cases the gruels are of great benefit and should always be tried in a slow growing infant. One teaspoonful of beef juice was given in every bottle and one teaspoonful orange juice given three times daily. This baby weighs now 12 and one-half pounds, a gain of one pound a month, in spite of its many upsets and diet of skim milk which was given probably half of the time. It evidently had an intolerance to fats as well as sugars. This is a type of case which is far too common and the treatment is discouraging but with a careful study of the child's tolerance, the final outcome is usually successful. I could cite many other cases of this class where the gain was more rapid and the treatment more satisfactory.

The treatment of malnutrition is dietary and general. Breast feeding should always be encouraged and every effort made to maintain it where there is normal growth. When the breast is not satisfactory, one should not be too conservative in putting infants on the bottle. When breast milk is good, it is better than good artificial feeding, but good artificial feeding is always better than poor breast milk. We now believe that longer intervals in the breast fed are conducive to better health. Most breast cases do better on 3 or 4 hour intervals when previously we advised 2 or 3 hour intervals. I am not satisfied about the efficacy of these intervals in the bottle fed. When commencing on cow's milk, it is well to give a cathartic, a bowel wash and a 12 hour hunger diet of saccharin tea solution. We have recognized recently that too long a starvation period is actually injurious to the child. In the mild cases it may only be necessary to add cow's milk gradually and at the same time to withdraw the present food. The breast cases are handled the same way, unless there are reasons for sudden weaning.

In regard to the modification of cow's milk in these cases, a very weak mixture is essential at first. Then the mixture is gradually increased according to the digestion of the child. In infants of normal digestion and those of the malnutrition type where the digestion is not seriously impaired, the ordinary milk formula is satisfactory. This is briefly as follows:

First mo.	1 oz. Milk	2 oz. 5% sugar water	2 hr. intv.	10 feed
2nd	1½	2½	2½	8
3 and 4	2½	2½	3	7
5th	3½	2½	3	6-7
6	4	2	3	6
7	5	2	3	5
8-10	6	2	3	4

You will notice that we have made no mention of the percentages and properly so because they are somewhat complicating and unnecessary. They can be figured out for reference. This method of feeding as well as other methods is often attended with some food injury. Our greatest error in this connection has been the erroneous idea concerning the curdy stool. This curd according to Finklestein is not undigested casein but composed of fatty acids and bacteria, and is only seen in babies fed on raw milk. Therefore, the fats and sugars are the usual disturbing elements in milk. Proteids are digested in relatively high percentages without any disturbance. This is shown by the use of albumen milk in cases of weak digestion. The treatment of a fat injury therefore is not necessarily the withdrawal of the cream but a change or diminished sugar content. The stool resulting from a sugar injury is apt to be liquid, foul odor, sometimes green, with varying amounts of mucus, the treatment of which is a withdrawal of the sugar or a change in the kind of sugar. Are there infants who will not tolerate cow's milk? Occasionally, we see a case where the milk is digested with great difficulty but an actual idiosyncrasy is rare.

Where the digestion is very feeble or has been badly damaged as in the severe cases of malnutrition there are various ways to adapt cow's milk to the digestion. Skim milk boiled will answer in the majority of cases. Boiling the milk increases the digestibility.

Buttermilk is practically the same as skim milk but with an increased amount of lactic acid. This is advantageous in certain cases of weak digestion. It may easily be made from the lactone tablet. Buttermilk with the addition of a gruel and sugar may be used for a long time with good results.

The use of whey we have found beneficial in some cases notwithstanding the fact that the sugar and salt content is injurious to weak digestion. Babies fed on whey are apt to have flatulence. The stools do not improve in number but rather in quality. Skim milk is usually added to the whey when there is an indication for more food.

Albumen milk is especially useful when the digestion is intolerant to all other foods, but on account of the difficulty of preparation it is not practicable in the majority of homes. It can be made, however, if enough attention is paid to details. I would recommend a more general use of this milk in all disturbances of digestion.

In the severe disturbances of digestion, either of the enteritis type or the intoxication type, the question of food is a very important one. The malnutrition which follows this condition is very apt to be severe because so much weight has been lost either through fluid stools or the using up of the body energy by toxemia. Whether this loss has been acute or protracted the digestive resistance has been greatly lowered so that the feeding at this time must be a careful procedure.

It is the usual method and rightly so to begin after a hunger diet with the former food in small amounts. This will be tolerated in the mild cases but not in the severe cases. If a child has been taking cow's milk before a disturbance the chances are that it will not digest it at this time, but we may start on some proprietary milk with a moderate degree of safety. If, however, the child has had a proprietary mixture before an intestinal disturbance then the problem is more difficult.

It is in this type of cases that I think Eiweiss milk is especially indicated. As a usual thing the child will not gain on this milk and it is not given with that intention, but the general condition will improve. Later, cow's milk may be added gradually according to the tolerance of the digestion.

Next in importance to diet is general management, air being the most essential. Many of these patients will not improve on any formula until fresh air is secured. (Ginsberg). The natural tendency of a mother who has a delicate infant is to keep it closely confined for fear of its catching cold. In the country you do not have this problem so manifest. Cool sponging, massage, cod liver oil, nux vomica, beef juice and orange juice, all help in the general care.

In conclusion let me say that no matter what kind or degree of malnutrition, cow's milk should be the ultimate aim in feeding. This method which I have given you commends itself for its simplicity. Feedings are easy to prepare and it is successful with the ordinary grade of cow's milk. I must emphasize, however, the necessity of a close scrutiny in every case, the several factors that may produce infantile malnutrition. A conservative beginning with the whole milk method and a gradual increase as fast as tolerance can be ascertained. With a fair knowledge in the use of skim milk, whey, albumen milk and a limited use of the proprietary foods the ordinary cases of malnutrition can be treated successfully.

572 W. Ferry St., Buffalo, N. Y.

Treatment of War Wounds in the Period of Attack. Marquis, Descazals, Luquet and Morlot, describe the method of securing prompt definitive treatment. A large operative pavilion is established as near the front as possible, with Y operating rooms and the necessary annexes, carried by 11 surgical and radiologic trucks. The wounded receive attention in 6-12 hours from the time of the wound. Congestion is prevented by providing special ambulances for the moribund and the slightly wounded, 3 kilometers in advance of the hospital. By eliminating the process of sorting and attending to these cases, 178 patients have been cared for at the mobile operating hospital in 24 hours. They present the following statistics: 298 wounded represented 550 different wounds. Of these, 342 were of soft parts, 133 osseous, 34 articular, 15 cranial including 11 with the meninges opened, 19 of the abdomen including 18 visceral, 12 of the thorax, of which 5 involved the lung and 7 only the pleura, 109 wounds of all kinds were sutured primarily, 370 secondarily—total closures 469, 85% of all the series.

59 days after the attack, 108 of the 298 wounded, 36%, had been discharged convalescent. 109, 36% were practically healed and awaiting discharge, some on leave, some to centers of further treatment, 13, 4%, had been evacuated healed, to centers of mechanotherapy, neurology, etc., for muscular training, etc. 45, 15%, had not been benefitted by suture, the majority of them will be healed without further attempt. 21 died after operation, 9 before, a total mortality in the series, of 6.5%.

Venereal Disease Incidence in the Army. The aggregate incidence, Sept.-Dec., 1917, was 162.4 per mille for the N. A., 115.2 for the N. G. and 88 for the regular army. The first two proportions apply to conditions at time of enlistment. The value of discipline and instruction and the fact that venereal disease is a civil and not a military danger, are clearly demonstrated.

Notes on Poisoning in the Coal Tar Industries.

By DR. F. G. MÖHLAU, Buffalo, N. Y.

Physician in Charge Natl. Aniline & Chem. Co. Buffalo, N. Y.

The manufacture of coal tar products in almost endless variety has developed tremendously within the last few years. Since the outbreak of this world's war the coal tar industry has introduced in this country an entirely new set of problems. As the fields of investigation in this line grow larger and more complicated, the needs of workers in the coal tar industries make greater demands upon our ingenuity. These new conditions confront the workers in the manufacture of munitions, dyes, and rubber goods. Physicians who are responsible for the health and welfare of the great army of employees in these various factories are just beginning to meet the demands in a scientific way.

It is only during the last few years that clinical records can be found of such pathological conditions as benzol dermatitis, for example, to mention only one of many conditions resulting from aniline poisoning. It is unfortunate that we have so few observations on record to aid the industrial physician. It seems that the seriousness of these conditions is not sufficiently grasped by the profession at large. It is necessary for every physician to make himself acquainted with the dangers connected with the manufacture of munitions, rubber goods, dyes, and aniline products in general. The various gases evolved in the process of manufacture of munitions and colors have a most deleterious effect upon the blood elements and the circulation as well as upon the genito-urinary tract and liver. The gases evolved in the nitration of various coal tar products, when carelessly inhaled by the worker, have a very disastrous effect on the blood cells where their destructive power is manifested in a most serious manner. The benzol vapors, whether bi-nitro-benzol, or tri-nitro-chlor-benzol act as very strong toxins on the blood cells and their effects on the nerves and nerve centers are severe and of a most alarming character.

In this form of poisoning, the first symptom that strikes us is decided cyanosis of the lips and tongue, sallow color of the face, apathetic expression and a varying degree of blueness of the finger nails as in poisoning by acetanilid. As a rule, the breathing is difficult and shallow, often amounting to dyspnoea.

We find that when a man has been living for any length of time in an atmosphere charged with the fumes of bi-nitro-benzol or diamin, he will develop the following symptoms:

Anaemia; marked gastro-intestinal disturbance; congestion of the vasculo-glandular network of the liver, resulting in congestion and derangement of function; enlargement of the spleen; jaundice in varying degree; constipation is marked; diarrhoea, only in summer on cloudy and oppressive hot days. The temperature is usually reduced to subnormal. I have very rarely found a rise in temperature. Conjunctivitis is usually pronounced and recurs frequently. The patient feels irritable and depressed. The urine: specific gravity high; highly colored with bile pigment; phosphates excessive in amount; albumin absent in early stages, unless kidneys have already suffered structural changes, or hematuria has set in. The pulse is full, soft, and compressible, with complete loss of tone; rapid at first, then slower after a short time. The respiration is shallow and difficult. After a short period, the patient will complain of muscular pains in the legs and arms resembling rheumatism. Intercostal pains are frequently observed. There is a short, dry cough with little tenacious mucus; subacute bronchitis is not infrequent.

Our treatment has been very satisfactory when regularly carried out under close observation. Lactic acid has been found most effective in the form of buttermilk and whey, or milk in large quantity for diuresis. After the surroundings have been changed, affording an unlimited supply of fresh, moist air we attend to the activity of the skin. Cool sponges followed by friction are of marked benefit. Later the hot bath and Turkish baths are a necessity. Following an acute attack of this poisoning, a period of rest and recreation becomes necessary. The food question must not be overlooked. Not resisting power not immunity can be established,—only improving the general health. A man once poisoned must not be allowed to be exposed to the same surroundings.

During the four years I have been called upon to watch over the health and welfare of from 500 workmen in 1915 to 2000 and more in 1917, I have had the opportunity of treating about 641 cases of aniline poisoning in various stages of severity. I am glad and proud to say not a single death has occurred among all these victims of poisoning. I may possibly account for this by the fact that whenever I observe a worker even slightly cyanosed I insist on his taking rest; the more severe cases are immediately sent to the hospital which they are permitted to leave, as a rule, whenever the cyanosis has subsided and the hemoglobin is beginning to mend. And yet, leaving the hospital does not mean a return to work or a relaxation of treatment. The patient is to live in fresh air under hygienic conditions, with well regulated diet and proper medication. A hot bath once daily is considered essential with massage and a cool sponge in the morning. I recommend milk in all forms, especially buttermilk and sour milk which certainly prove the value of the Bacillus Bulgaricus. Nux vomica has no superior as a remedy. I give 8 to 10 minims three or four times daily and it never fails to produce a result. Blaud's mass with manganese and arsenic is also given four times a day in full doses with excellent results. Oxygen is administered freely at frequent intervals as long as cyanosis exists. Massage is kept up. Cathartics are given as long as an excess of bile is found in the urine or while the serum is bile colored. As long as the liver shows enlargement and the spleen remains congested, a dose of ergot is given with good results. One teaspoonful twice or three times a day. In the aniline industry we have to guard against sequalae of acute attacks of poison by inhalation of gases given up during the nitrating process, be it absorption by skin or ingestion by mouth or inhalation of finished color product, the effects on bladder, ureter and kidney are of such a character as to puzzle the average physician. The effects produced in the bladder, I have been able to observe repeatedly but on account of lack of time, I have been unable to give closer study to the action on the kidneys. I have seen several bladder cases that present typical pictures of cauliflower growth, where no malignancy could be demonstrated. Cystascopically the picture presented is a growth mostly like a red coral or cauliflower. In one case the bladder was almost obliterated by such a growth. The least local irritation produced profound hemorrhage with very little or no pain, the anemia produced hurrying the fatal exit. I had the opportunity to observe four such cases in the late stages, rendering surgical interference impossible and any medical treatment was absolutely of no avail. Due to pressure of other work, I have been unable to follow these conditions from a pathological standpoint.

237 East Utica St., Buffalo, N. Y.

Tuberculous Meningitis. Tilli, Giornale de Med. Chir., March, recommends injecting 1-3 c.c. of the patient's spinal fluid on alternate days. He reports a case apparently cured for three years, one arrested for the same time though with persistence of blindness and hydrocephalus, one with a remission of 20 months followed by recedive and death.

Typhoid Maladies of the Horse. R. Combes, Le Prog. Med., Apr. 6, has found a bacillus closely related to B. paratyphosis B., infectious not only to horses but to man, by accidental conveyance or use of improperly cooked meat. Veterinarians and hostlers have noted cases similar to human typhoid in horses.

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Recent Legislation.

Public Health Laws are being enacted by most of the states to meet new conditions affecting public health that increasingly arise in our complex and congested centers of population as well as in rural communities, where such maladies as Spanish Influenza sweep over great cantonments or as small pox over sparsely settled districts.

In order to prevent contagion from the spread of infectious diseases, quarantine laws are enacted and suspects are isolated until the danger of infection is passed.

Both the Federal and State Governments exercise their sovereign powers to preserve the public health. Since the enactment of the Food and Drugs Act of June 30th, 1906, the Congress of the United States has supplemented that statute in the enactment of several amendments thereto. Among other things the Act authorized the secretaries of the Treasury, Agriculture and Commerce and Labor "to make uniform rules and enact regulations to carry out the statute," which the Supreme Court of the United States in the case of U. S. vs. Antikamnia Chemical Company decided might be done. Such power is at least of doubtful propriety in that the violation of any such rule or regulation subjects the person so violating it to prosecution.

The inadvisability of clothing administrative officers with the power "to make uniform rules and enact regulations" as the statute denominates it, which rules and regulations have the same force as the most carefully prepared law, though they may not have any such consideration, as that given to bills in their passage through the committees of and through Congress itself, must be apparent to the Medical Profession as it is to lawyers. Any ambiguity in the phrasing of any such rule or regulation might also subject any member of the profession, failing to correctly interpret any such rule or regulation as it was intended to be interpreted to prosecution. The power "to enact" is a legislative power and under the constitution of the United States and of the states is vested in their legislative departments, where it should be exclusively exercised and not conferred upon executive officers nor upon commissions. The object and purposes of the Food and Drugs Act of June 30th, 1916, are commendable, but its interpretation has been perplexing and expensive, as the records in and out of courts clearly show.

On December 14th, 1914, Congress passed the so-called "Harrison Act," of which the following is the title, namely "An Act to Provide for the Registration of, with Collectors of Internal Revenue, and to impose a Special Tax upon all persons who produce, import, manufacture, compound, deal in, dispense, sell, distribute, or give away opium or coca leaves, their salts, derivatives, or preparations and for other purposes."

That Act makes it unlawful for any person, who has not registered or paid the Special Tax imposed by that act, to have in his possession, or control opium, coca leaves, their salts, derivatives or preparations and it is also declared unlawful for any person to sell, or give away any such drugs without a written order, provided for, except deliveries by physicians to their patients, or on their order and in certain other cases.

In the U. S. v. Fin Fuey Moy 241 U. S. 394, the Supreme Court of the United States in construing one of the Sections of that Act said: "If opium is produced in any of the states obviously the greatest question of power would be raised by any attempt of Congress to make possession of such opium a crime." That indicates the attitude of the Court on that subject and it sustained the lower Courts in discharging an alleged offender of that act. That statute exempts the possession of such drugs prescribed in good faith by physicians and in some other cases.

The foregoing statutes indicate the trend of recent Congressional Legislation, which has given rise to much discussion in medical circles and it now appears that the Federal Registration Act if ever squarely tested in the Supreme Court of the United States, may be declared unconstitutional in some of its sections.

The Harrison Act has been followed by four legislative acts in New York, namely, chapter 363 of the laws of 1914, chapter 327 of the laws of 1915, chapter 431 of the laws of 1917, and chapter 639 of the laws of 1918.

The first three of these legislative acts of the state of New York, enumerate and regulate the use of Habit Forming Drugs. They are repealed by chapter 639 of the laws of 1918, but the repeal does not take effect until February, 1919, except that new sections 421, 422 and 423 of Public Health Law, comprised in the new "Article XXII," added by chapter 639 of the laws of 1918 as to the creation of the Department of Narcotic Drug Control, Commissioner Deputies, and Registry take effect on November 1st, 1918.

This new act is a complete revision of the present laws in relation to narcotic drugs, their sale, dispensation and use and comprises 25 sections, constituting a new Article XXII of the Public Health Law. Section 423 is of present interest to the persons and institutions mentioned therein and reads as follows: "Section 423. Acts prohibited; registry. No person shall possess, sell, distribute, administer or dispense cocaine or opium or its derivatives except as expressly and specifically authorized by the provisions of this article and any unauthorized possession, sale, distribution, administration or dispensation of such drugs is hereby declared to be dangerous to the public health and a menace to the public welfare. No manufacturer, wholesaler, apothecary, physician, dentist, veterinarian or private hospital, sanatorium or institution maintained or conducted in whole or in part for the treatment of disability or disease or inebriety or drug addiction shall purchase, receive, possess, sell, distribute, prescribe, administer or dispense cocaine or opium or its derivatives unless prior thereto he shall have registered with the department his name or style, place of residence and place or places where such business is to be carried on, and received from the department a certificate authorizing him to carry on such business. During the month of January after this article takes effect he shall so register with the department. During each month of June, thereafter he shall, in like manner, register with the department and for such second and each subsequent registry shall pay to the department a fee of one dollar."

The entire article must be read by the profession to understand all its provisions, but enough has been stated herein to put the medical profession on guard, which is all that is attempted in this article. This recent statute must be read in conjunction with the Harrison Act, still in force.

When Johnny Comes Marching Home Again.

The problem of the volunteer army surgeon in resuming private practice at the close of the war, has wisely been taken up in advance, both by the Surgeon General's office, the State and various other medical societies. The general experience of the past has been that it requires about four years to build up a living practice except when competition is practically nil on account of the small size of a village where also, acquaintance by and with or, at least knowledge of the existence of a physician, is easily acquired. Experience has also shown that it makes little difference whether the physician is a recent graduate, one of long practice but without acquaintance or even if he resumes residence where he has previously been known or has practiced, after a long interval. On the other hand, a brief absence, up to six months or a year does not have a serious destructive influence on practice, especially if for professional duty or for a good reason of any kind. For this reason, quite a number of medical men have urged that volunteer service be on a six months' basis but the argument against this plan, from the standpoint of the army or navy, is obvious.

The various plans for turning over private practice intact, in trust to a substitute, during the period of service, depend for success upon the actual survival of the old conception of a permanently loyal personal clientele. Without having attempted to gather statistics, we are somewhat sceptic as to the fundamental basis of this plan. The permanency of a practice differs somewhat according to longitude, in favor of the east; somewhat according to population, in favor of the smaller towns; considerably according to length of practice, in favor of the older men; obviously, largely according to nature of practice, whether general or special, surgical or medical, family or consulting, etc. In general, we are inclined to think that very few practices of men likely to serve with the army or navy for the war, can be handled as units, even if we assume good faith and altruism on the part of all concerned.

From the experience of the Civil War and with due regard to modern conditions, we believe that the young man who has not built up a considerable practice will make no sacrifice in volunteering, limiting the word sacrifice to purely professional considerations. He will receive, all things considered, as much as he would get in private practice, will gain a wide experience much of it available in subsequent civil practice, will be well disciplined and will gain a prestige which was of indubitable value after the Civil War. The surgeon, depending mainly on consultation and reference practice will sacrifice only what can be immediately reckoned by subtraction of salary from fees and will gain both in actual skill and in prestige, for the future. Some hold the opinion that the sacrifice is greater for older than for younger men, whatever the nature of their practice. From one standpoint this is true, as they will have less time in which to reap ultimate benefits. On the other hand, they are more likely to be prepared for final retirement, diversity of experience in life counts more with them than actual years, they or their heirs are more likely to receive the somewhat sinister benefit of various forms of pension.

What we want to emphasize particularly is that it is more important to exercise the general principles of fair play and consideration than to devise a theoretically perfect plan of caring for practices. For example, Dr. A, leaving for military service, turns over patient X, a unit in a suppositious permanent clientele, to Dr. B, using a special blank for that purpose. It is easily seen that X may prefer to go to Dr. C and so on down through several alphabets and, it is clear that Dr. C, having been passed over by Dr. A, may feel no obligation to him. Even Dr. B may in many instances claim in good faith that Z has already been his own patient or, at least, that he belongs to A no more than to D, G, M and N. The actual fact seems to be that a great many patients have no definite allegiance to any one physician and that in many families nearly every member has his or her own physician, more or less subject to change. So far as most special and consulting practices are concerned, no scheme of turning over patients can be devised that will work without friction.

The real solution of the problem, it seems to us, is not to attempt to devise any formal system of substitute attendance but to cultivate a spirit of fair play, generosity and appreciation of sacrifice, that will give Dr. A, on his return to private practice, not only a cordial welcome but practical assistance in resuming his work. This can be done not merely by individual displays of good will within the profession but by whole-hearted and sincere appeals from the profession as a body to the laity. On the other hand, there are practical limits to such expressions of patriotic appreciation. The man who remains at home and attends to the increased medical work, pays increased taxes and contributes to various philanthropies of war, is by no means necessarily a slacker, he should not be required to do an excessive amount of work without pay, nor should he be made a post bellum sacrifice. It is probable that the war, even with no exaggerated ideas of the direct killing off of physicians, will in various ways, tend to bring about an equilibrium of demand and supply as regards the medical profession. We shall probably maintain a good sized military establishment for some years and this, in turn, will require a permanent increase in the army medical corps. Various undertakings, requiring medical services, on a contract basis under the control of the government, will undoubtedly be initiated or greatly increased as war measures and will continue after the war. There are many ways in which one or another branch of the government can provide for the more or less permanent employment of the surgeons whom we regard in anticipation as to be thrown upon their own resources at the conclusion of hostilities. A reasonable effort by the national and local governments to provide places for surgeons on the conclusion of their service, combined with popular and professional good will, expressed in practical ways, ought to solve the problem. And, finally, we must not forget that war demands sacrifices, which can not be distributed with absolute equality nor nullified by systems of insurance against sacrifice.

The Milch Goat.

The present high cost of milk and dairy products generally is not entirely a war condition, nor due to any single and conspicuous factor. While subject to explanation in regard to various details, it is not due to any considerable recent increase of density of population, to a shortage or vitiation of grazing land, to any increase of disease among cattle, to any marked competitive factor which should tend to distract agricultural labor from milk production. Two factors likely to be overlooked are of importance: Cleanliness in handling dairy products, as in any other particular, costs time, brains and therefore money, although we are slowly learning this fact and still are inclined to regard cleanliness as an additional beenfit which can be had for nothing but the desire. The dairy business has, gradually but on the whole generally and almost completely, become big business instead of a scattered retail one. This ought, theoretically, to tend to economy and cheapness but, as a fact which we are equally slow to realize, it practically always means the reverse. The essential reason why milk and its derivatives have increased in price is that the men producing them, want more pay—like almost every one else. The only way to preserve some measure of cheapness in these vitally necessary foods is to attempt the fulfillment of the politician's highly popular slogan—High wages and low prices! Whether success is possible is another question.

Meantime, the goat offers itself as a possible solution of the immediate problem for a considerable part of the population interested, even in cities. The average of a large herd yields about a quart and a half of milk a day, permanently, including inactive does and the necessary bucks. During the milch period of somewhere about 3-5 months, the per capita yield is about a gallon a day, sometimes more. Co-operation in small family groups would obviously yield an adequate supply, except for the impossibility of arranging a schedule free from fluctuations above and below the required amount. The goat is, so to speak, a portable animal. It can literally be transported to care for the needs of children, and is commonly driven from house to house to deliver fresh milk, in those continental cities where it is a staple source of milk. It is portable in the less direct but more practical sense of being available where a large animal like the cow would be entirely impracticable. Its intestinal physiology is also a practical advantage. Its upkeep is relatively low, though it is scarcely necessary to say that it does not nourish itself on entirely inedible substances. It can be kept in a small back yard, is not especially objectionable in a city, can be housed in a dry-goods box or two piano boxes joined or in a shack that any boy can construct without appreciable expense. It can be kept clean by turning the hose on it in the summer and, even in winter, as readily as a large dog.

Goat milk is not of a disagreeable flavor as popularly supposed but is of approximately the composition and taste of good cow's milk. The goat is practically immune to tuberculosis and the only appreciable sanitary danger, eliminated by reasonable and obvious precautions, is in regard to the importation of Malta fever. Whether the immunity to tuberculosis has more than a negative value in regard to the use of milk for human beings and especially infants and children, is not yet decided.

The principal practical obstacles to the immediate use of goats as milk producers are: conflict with health ordinances, the liability of the retail user to come up against fancy prices either as a purchaser of milk, of a goat or its feed, according to well known economic principles or lack of principle, as for anything that is new and not standardized by long business custom. The individual labor necessary must also be considered. Mr. W. C. Bull of this city is an authority on goats and it seems to us that the time has come when a serious attempt should be made to solve the milk problem by the use of the goat.

Note: Grade B, Pasteurized Milk, retails at 10 or 11 cents in N. Y. City; at 14 cents in Buffalo.

Conservation.

Early in our involvement in the war, the opinion was expressed that, if it were not too long continued, not only the enormous expense but the loss of life might be compensated for. Against the field and camp mortality must be balanced the fact that in the year and a half since war began for us, the approximately three million men in our army would have had somewhere from 25,000 to 35,000 deaths anyhow and an amount of traumatic disability and disease probably not far from the total noted in military statistics. For the future, the protection against typhoid, paratyphoid and small pox by artificial methods, against various infectious diseases which they might or might not have had in civil life but which they have passed through under conditions averaging as favorable at least as in civil life; the sanitary, hygienic, dietetic and physical training; the radical cure of hernia, appendicitis and many other conditions, the sorting out and warning as to future care on the part of defectives of all kinds, will react to produce a lower death rate for a generation. More than this, each soldier not grossly stupid or careless will be a focus of sanitary education and the saving of life and health will undoubtedly be permanent.

While statistics prove that the purchasing power of the ante-bellum dollar is only 59 cents general experience is that by using material on hand, selecting cheaper but not necessarily inferior foods and wares of all kinds, by little thrifts and avoidance of waste, standards of living have been reduced only slightly while wages have risen disproportionately. General prosperity always depends largely on the rapidity with which money circulates. The fact that there is only about $56 of money per capita and that about $200 per capita is being paid to the government, not only indicates that our circulation is good but affords a strong hint as to how it may be maintained at a high pressure. While, especially with regard to railroad fares and to a less degree with regard to other utilities, immediate results have been disappointing, there are reasons for these disappointments and the general expectation is that government ownership of proper utilities will reduce prices or, at least prevent unwarrantable increase. The war has greatly hastened the tendency in this direction and changes should be made with due caution.

The large aggregate value of trifling matters formerly almost entirely wasted, such as tinfoil and paper may properly be devoted to various philanthropies after the war, as the saving is usually too slight to pay as a matter of individual profit and the aggregate can be maintained only by philanthropic duties. More important, the war has shown what many hard-hearted persons, including the present writer have long suspected, that many forms of philanthropy were wasteful and unnecessary and the improvement in economic conditions, elimination of a large amount of drunkenness and loafing, have greatly reduced the burden of philanthropy. It is not impossible that all future philanthropy may be financed on the saving of waste and the voluntary donations and legacies of the very rich.

The war has taught many of us that our scale of living was unnecessarily luxurious. For example any cheap lodging house and beanery are better in comfort, though not in hygienic factors, than the average of camp life on which men grow strong and healthy. It is not desirable that the extreme thrift necessary during war should be continued in peace but the lesson is valuable. The same is true as to the utilization of labor of females, minors and the aged.

Conservative conservation should be the slogan after the war.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

Review of War Surgery and Medicine: This monthly magazine which is prepared in the office of the Surgeon General contains the latest reports of treatments of diseases occurring in the military zones. Copies may be seen in the Buffalo Grosvenor Library.

The Wassermann Test. By Charles F. Craig, A. M. (Hon.), M. D. (Yale), Lieutenant Colonel, Medical Corps, United States Army; Fellow of the American College of Surgeons; Formerly Assistant Professor of Bacteriology and Pathology, Army Medical School, and George Washington University; Commanding Officer, Department Laboratory, Central Department, United States Army, Fort Leavenworth, Kansas. Published with authority of the Surgeon General, United States Army. Cloth, 239 pages. Illustrated with Colored Plates, Halftone Plates, and Fifty-seven Tables. C. V. Mosby Co., St. Louis, 1918.

This work on the Wassermann test will be of great value to the medical profession in general, but especially will it be welcomed by those who in the past have read the numerous valuable contributions to the literature of the subject by the same writer.

Craig, by reason of his vast practical experience and the clearness and accuracy of his writings on the Wasserman test has come to be regarded as one of the highest authorities. The figures and statistics which he presents in this volume are impartially taken from large numbers of cases in the army, over whose treatment there is almost perfect control.

The principal of the Wassermann reaction is cleverly unfolded while giving the history of its discovery, which together with the schematic representations offers a lucid explanation of the phenomena of bacteriolysis and hemolysis. Whereas the author's nomenclature may seem at first confusing, it stands for simplicity and standardization, as he clearly states a positive reaction should not be termed four plus, Craig's two plus, unless the test has been done with various rated doses of complement as in the methods of Citron, and of Browning and McKenzie.

On the whole the book is very well written and clearly illustrated and will serve as a concise and authoritative exposition of the well known facts of the Wassermann reaction.

War Surgery of the Abdomen. By Cuthbert Wallace, C. M. F., F. R. C. S. Eng., M. B., B. S. Lond., Surgeon St. Thomas' Hospital; Lecturer on Surgery in the Medical School; Consulting Surgeon, British Armies in France. Cloth, 152 pages with 26 illustrations. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St., 1918.

Wallace has written this valuable brochure in order to collect and to tabulate the experiences in abdominal surgery of a group of doctors over a period of thirty months at the front. The thought being to offer a standard of comparison for other doctors called to treat those wounded in the abdomen. He has embodied much of the available treatment of abdominal injuries founded on the war practice of this group of surgeons working under different conditions in different hospitals. Anyone who wishes to study the conditions met with during a period of thirty months at the front will find Dr. Wallace's book to be a rich fund of information covering new and complex experiences, to be well digested and to have carefully classified the work of many surgeons.

To read the book gives one pleasure; from the typographical point of view it is up to the highest standard.

The Medical Record Visiting List, the familiar pocket red book has appeared for 1919. Price for 30, 60 and 90 patients monthly, $1.50, $1.75 and $2.25 respectively. Publishers Wm. Wood & Co., 51 Fifth Ave., N. Y. The middle one used to be ample for us but in military work, we have often seen 100 or more patients a day and nearly or quite 1000 different men in a month.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

The Medical Association of Central N. Y. omitted its annual meeting in Oct. on account of the absence of large proportion of its members in military service. The Ohio State Society has taken similar action and it strikes us that it is sound economy both of money and effort to forego most medical meetings that require more than local travel, until the war is over.

Rochester Academy of Medicine, meeting; October 9th. Captain J. H. Elliott of Toronto read a paper on "Tuberculosis in the Canadian Forces and how the Problem is being Solved."

The annual meeting of the **New York and New England Association of Railway Surgeons** was held in New York on October 21st. Papers were read by Drs. W. H. Marcy of Buffalo; Donald Guthrie, Sayre, Pa.; W. L. Estes, South Bethlehem, Pa.; Walter E. Lee, Philadelphia; Chas. Geiger, St. Joseph; J. S. Hill, Bellows Falls, Vt.; Jos. C. Bloodgood, Baltimore; C. W. Hopkins, Chicago; Wm. Seiger, Pueblo, Col.; F. Park Lewis, Buffalo, and A. H. Harriman, Laconia, N. H.

The Annual Meeting of the **Medical Society of Central New York** scheduled to take place on 10-17-18 will not be held this year. This action was taken at a meeting of the executive committee who decided that because of absence of so many members at the front and account of the supreme importance of giving all available time to war matters, it was advisable to postpone the next annual meeting to October, 1919.

The first meeting of the season of the **Buffalo Academy of Medicine** was held October 2d. Dr. Wm. D. Johnson of Batavia read a paper on "Improvement in Surgical Results," and Dr. Bernard Schreiner read one on "Treatment of Basal-Celled Epithelioma, with report of 50 cases."

The second meeting was held on October 9th under the

Section of Medicine. Dr. Frederick Peterson of New York read a paper on "Preventive Medicine and the Reconstruction of the Race."

Section of Gynecology and Obstetrics—October 16. Program—"The Psycological Neurosis of Pregancy and the Peurperium," by Dr. Jennie Harris of North Tonawanda. "Treatment of Posterior Presentation," by Dr. Thomas Allen of Buffalo.

Section of Pathology—October 23. Program—"Value of Spinal Fluid Examination," by Dr. John Eckel of Buffalo.

Section of Surgery—November 6th. "The Skin Sliding Operations in Chronic Suppurative Diseases, especially in Empyema," by Dr. Emil G. Beck of Chicago.

All members entering military service may have their dues refunded. Those in service are exempt from payment of dues and will be considered in good standing until their return to civil practice.

TOPICS OF PUBLIC INTEREST

Major General Wm. C. Gorgas, Surgeon General of the Army, was retired at the age limit, Oct. 4. He was at the time in France and will probably be retained in an advisory capacity. He is succeeded by Major General Merritte W. Ireland, formerly acting as the representative of the Surgeon General for the American Expeditionary Force. The place of the latter will be filled by Brigadier General Robert E. Noble.

British Professional Statistics. The United Kingdom has 43,819 physicians and 5,500 dentists. Of the former, England and Wales have 23,175; Scotland 13,918; Ireland 6,176. The annual increase has been from 501 between 1912 and 1913 to 338 between 1916 and 1917. Deaths, authenticated, have been 746, 1068, 800, 1005, and 831 1913-1917, respectively. The number of students in 1917 was 7600, 1500 more than in 1916 but less than the ante-bellum average. Whether these figures include men in military service and military deaths or not, is not stated.

German Man Power now totals about 2 million on the western front, according to count of divisions. The losses in prisoners alone have been stated to be 185,000 for Aug. and Sept. and the definitive losses may be estimated at about three times this number or a rate of about one division a day, according to the present reduced make-up of a division, from the original of about 13,500 to 10,000. Sept. 10, the number of divisions on the western front was stated to be 195. It is also said that the class of 1920 has been withdrawn from active service at the front as being too young (17) and poorly nourished to stand the strain. As previously explained, the uprising generation cannot be depended on for any nation at war, with its maximum militia engaged, to do more than make good the ordinary wear and tear aside from military casualties, and Germany has already drawn on the future to the extent of two annual classes. If this rate of attrition can be kept up, it is a comparatively simple problem to estimate Germany's endurance, providing that forces are not available from other fronts or from unforeseen sources. The present force is a little short of the estimate of 5,000 men per mile considered necessary, including exchange troops and immediately available reserves. The time seems to be near when total casualties will have almost as great an effect as definitive casualties, which equal 40-50% of total. Then, a shortening of front will become imperative.

State Commissioner Biggs states that bacteriological research on cases of this disease point to the probability that it is caused not by any new organism, which would justify the use of the word "Spanish" as describing it, but to the so-called Pfeiffer bacillus or influenza bacillus which caused the serious world epidemic from 1889 to 1892.

A definite conclusion as to the causative factor cannot, however, be reached until further laboratory investigations have been completed; this the State laboratory, together with many other laboratories, is undertaking at the present time. Clinical observations made a few days ago by a member of the Staff of the State Department of Health on a number of cases occurring in United States sailors showed that the typical form of the disease shows very uniform symptoms. The onset is accompanied by fever which varies from 101 to 105, headache, pains in the muscles and bones, and a good deal of prostration; there is a dry, nagging cough, with at first little expectoration. There may or may not be profuse discharge from the eyes and nose; the throat may be quite red, sometimes intensely so, more often it is not markedly affected. The course of the disease when uncomplicated is short, the temperature falling in from 48 hours to three days to normal. In some cases the disease begins with vomiting and diarrhea and the catarrhal symptoms only appear later.

In addition to typical cases, many atypical ones occur which present only the symptoms of an ordinary cold with no marked rise in temperature or great prostration, and even in the same household will be found typical and atypical cases, in all probability caused by the same type of organism, the different reaction being dependent upon the different degrees of resistance of the individuals affected.

The disease is seldom fatal of itself except in very susceptible or weak individuals. The complications, however, notably pneumonia, are very much to be dreaded; many deaths have already occurred from pneumonia.

Commissioner Biggs stated that strict quarantine measures, such as one would take against other infectious diseases, while theoretically desirable, are not practical in view of the highly contagious character and the wide spread extent of the disease, and the general susceptibility to it.

Like other infections of the respiratory tract, influenza spreads from one individual to another by contact with the discharges from the nose and throat, scattered by coughing and sneezing, the use of common eating utensils, towels, etc. For this reason, insofar as possible badly aired and crowded places should be avoided, as well as excesses in eating or drinking, or any over exertion or over fatigue, which tend to weaken the bodily resistance.

There is no known cure for the disease.

American Doctors are enrolling in the Volunteer Medical Service Corps at a gratifying rate. 19,225 applications have been received to date. In response to the appeal that State executive committees be enlarged and strengthened for the work of handling the Volunteer Medical Service Corps matters, and also the request that a representative in each county be quickly designated, practically all of the States in the country have complied and have sent in the personnel of the State executive committees and of the county representatives to the headquarters of the Volunteer Medical Service Corps in Washington. The make-up of each state committee has been the joint work of the central governing board and the State committees, medical section, Council of National Defense, in each State. There has been the closest co-operation, and the officials of the central governing board are assured that the executive committees will all hold frequent meetings and keep in close touch with the situation in their respective States.

Whale Meat, long in use in Japan, has assumed an importance for all countries with an available supply, even occasionally, as a substitute for ordinary meats. It is described as palatable and resembling beef, being coarser in texture and darker, but not tough. It has sold at 10 cents a pound in coast cities.

Physical Tests for Airmen are Novel and Exciting.. All men who have won their wings in the United States air service are now required to pass a new heart, lung, ear, and eye test to establish their physical and mental fitness when high in the air and particularly to indicate at what heights they are in a condition to fly. Cadets receive a test before they finish their schooling; flyers are given these tests periodically to eliminate any whose physical or mental efficiency has become in any way impaired.

To stay in the rarified air at an elevation of 20,000 feet for any length of time has been found to be a strain on even the most physically perfect. It has also been discovered that many of the most seasoned fliers can not undergo the sudden quick changes in altitude occasioned by diving and climbing without physical deterioration. It was recognized as too great a risk to subject these men to actual flying tests. So the medical laboratory at Hazelhurst field undertook to devise some way of getting the same results by means of a ground test.

In the early tests the pilot was placed in a steel airtight cylinder from which the air was gradually exhausted and then replaced, to simulate a flight into the rarified air of high altitudes and back to earth, but today the pilot sits comfortably in the same room with his examiners. His nose is clamped so that he can not breathe through it. Over his mouth is placed the breathing apparatus, which is connected by tubes with a tank of measured air, and with instruments that record every breath he takes. The air is analyzed at various stages of the run. As fast as he exhales the air is taken into a reservoir where it is cleared of carbon dioxide, and then returned to the tank. Gradually he uses up the oxygen and thus air conditions of high altitudes are duplicated. The higher one goes up, the rarer the air becomes; just so with the man under test.

The man under test is kept fairly busy, just as he would be piloting a plane. Before him on a table is a bank of small electric lights, one or another of which flashes every 5 seconds. These he must extinguish as fast as he observes them and before they go out. He has but a few seconds. Below the lamps is a corresponding set of buttons which, when touched with a pointer held in the right hand, extinguishes the respective lights. Two observers watch him constantly and check his errors or delayed actions.

Another instrument before him is an ammeter which acts similar to a speed dial on a plane, and, accordingly, in the test must be kept at a constant point.

As time goes on (and the test lasts for about 30 minutes) the pilot becomes a bit groggy or sleepy from lack of oxygen, just as he would at the corresponding altitude, and this condition becomes manifest in changes in the action of his heart, eyes, ears, and brain.

A few minutes after his release from the apparatus all signs of his recent fatigue pass away and he becomes normal again.

Italy's Total Military Force has amounted to 5 million, with definitive losses to date of about 1,350,000.

Army Death Rate for Disease Only 2.18 per 1,000 Annually. American troops both here and overseas continue to establish good health records. For the two months' period ending August 31 the combined reports of the American Expeditionary Forces and all troops stationed in the United States show an annual death rate for disease of 2.18 per 1,000—a fraction more than 2 men per 1,000 per year. The annual death rate for disease of men of military age in civil life is 6.7 per 1,000. The combined reports show that generally the health of the soldiers overseas is better than that shown by the men in training in this country. This is largely due to the fact that only men in the best physical condition are being sent to France, with the result that the reports of the troops in America carry the men unfit for overseas duty.

Women Doctors are urged to join the Volunteer Medical Service Corps. We have heard so much about the splendid work which has been done by the group of English physicians known as the Scottish Women's Hospitals. Let us show how quickly and ably the American woman doctor can respond to this call of help.

Women Physicians who are qualified for anesthetic service or who are competent to be intensively trained are requested to get in touch, at once, with Dr. F. H. McMechan, Sec'y Interstate Anesthetists, American Anesthetists, Avon Lake, Ohio.

Military Training and Post Bellum Industry. The question has arisen whether military discipline will fit or unfit for various industries in peace, whether subordinate positions will crush out initiative and higher positions spoil the individual for subordinate civil work or whether the reaction will lead too many men to seek executive and independent work. So far as direct training is concerned, no soldier will benefit more than the medical officer. For instance, a personal experience frequently exceeding 100 cases a day and including some thousands of full physical examinations cannot make one a better physician. Can some of our subscribers discuss this subject from actual observation after the Civil War?

Results of Reduction of Alcoholic Consumption in Great Britain. The weekly average of arrests for drunkenness declined from 672 in 1913 to 147 in 1917; delirium tremens cases in representative areas from 143 to 28; deaths from alcoholism from 719 to 222; attempts at suicide from 968 to 452. The last seems to show that the argument that alcohol affords relief from mental suffering is not well grounded.

The Definitive Losses of the Canadian Army were 115,806 up to Aug. 1. This total includes a comparatively small number of officers and non-commissioned officers transferred to the British Army. It represents a total depletion of about 20% in 4 years. As troops were sent in gradually, it is not possible to calculate anything like an accurate risk for a definite period but it justifies the belief that the German losses estimated at over 50% of the original militia strength are not exaggerated.

Butter. A Federal commission has been appointed to consider butter prices, It is feared that the present high prices will lead to such extensive use of substitutes as to permanently reduce the demand for natural butter, with an ultimate effect on the whole dairy industry. In this connection, it may be well to emphasize the fact that demand and supply are not so closely related as is usually believed. A very rare article may have almost no commercial value. Of course, the selling price of an article in common use does correspond to the abundance but only temporarily. Ultimately the price of anything corresponds not to the demand of the purchaser but to the demand of the producer or distributor for payment for his labor, subject to the opportunity that he has to turn his labor into other more profitable channels.

Cereals. The most recent estimates give the U. S. a wheat crop of about 920 million bushels; corn 2,777; oats 1,535. Last year's results were: wheat 650; corn 3,159; oats 1,587. While the total by bushels is about 150 million less than last year, the greater weight, not to mention its superior food value, of wheat, more than compensates. The wheat represents nearly double the amount that would be demanded in peace for our domestic use and at least three times the amount necessary to maintain an ideal state of nutrition of our own people, with a reasonable reliance on other cereals. Personally, we do not regard the mixture of wheat with other cereals or the substitution of corn breads, etc., as at all undesirable. Others may not agree but we have never encountered so wide a variety and such a degree of palatability of bread stuffs as since our sacrifice of wheat began. One item in regard to wheat conservation has scarcely received the attention it deserved. The fact that American troops in Europe could eat white bread and give it to German prisoners, produced a tremendous impression of power. The fact was given wide publicity and cannot fail to penetrate to Germany through neutral countries. It is stated that some German prisoners abandoned hope of victory on this account alone and it is probably no exaggeration that our sacrifice in the use of wheat—really no sacrifice at all—will count for as much in the determination of victory as a division of troops—perhaps more.

Milk. The Buffalo Common Council has approved an ordinance requiring all milk to be pasteurized except certified raw milk. 90% of all milk sold is already pasteurized largely because pasteurized milk is less perishable than raw. The wholesale price of milk has been set at 32.6 cents per gallon. the retail price is 15.5 cents per quart for Grade A, 14.5 for Grade B.

Paper Shortage. All periodicals are to some degree limited as to amount and quality of paper. One of our lay contemporaries complains as to the very liberal use of paper by various branches of the government and affiliated commissions in distributing news matter and propaganda with the request for publication.

Weather and Respiratory Infections. An impartial view of military experience in the last 18 months corroborates, in a practical sense, the old idea of taking cold. The etiologic relation of bacteria to coryza and deeper colds of the respiratory tract cannot be denied, while individual cases show that the climatic element is not absolutely necessary. But so far as epidemics and endemics are concerned, the importance of cold, damp and fluctuations of humidity and temperature within certain limits—and just such limits as the old practitioners had established empirically—cannot be denied. This is true not only of non-specific infections—though the line between non-specific and specific is becoming increasingly difficult to determine—but of unquestionably specific infections like influenza and pneumonia, of such as diphtheria whose relation to taking cold is less plain, and even of measles which is only symptomatically a respiratory disease in the minds of most persons. On the other hand, extreme cold weather, especially with fairly steady temperature and low humidity does not favor the occurrence of respiratory infections nor should one choose warmth and contaminated air in the treatment of an existing case or in the prophylaxis against spread of infection, against free ventilation and cold air.

The Passing of the M. R. C. The unification of the U. S. Army was a valuable measure, not merely to establish a solidarity of military power but to eliminate a considerable loss of efficiency in the inevitable paper work. It applies, of course, to the medical as to all other departments so that surgeons recently and temporarily from civil practice are now designated M. C. exactly like the regular army surgeons. However, one cannot refrain from experiencing a little sentimental regret at the removal of the distinctive designation of the men whose life work was with the army and whose seniority over volunteer and national guard surgeons was thus indicated. Then, again, many of the M. R. C. men were equally proud of their prestige as civilian practitioners and of their status as volunteers for temporary patriotic duty.

Conservation of Shells and Fruit Pits. If it had been realized even a year ago that charcoal derived from these substances was of superior grade for gas masks, a large stock could have been accumulated. Looking ahead it may be pointed out that practically all seeds, including the soft contents of pits of fruits, contain proteid to the amount of about 10% and that all seeds contained in dense walls also usually contain large amount of fat—as much as 60% for certain nuts. While certain pits contain cyanogen in combination and others various bitter principles, there is no question but that any objectionable substances can be removed even by such simple domestic procedures as boiling or roasting. Thus there is a considerable potential stock of nutriment that can be utilized if necessary.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Grover Wende spent the month of October in Washington on government work.

Dr. Lucien Howe was elected President of the American Opthamalogical Society at its annual meeting.

A subscription dinner was given Dr. Wm. D. Johnson at the Saturn Club on October 2d by the members of the Buffalo Academy of Medicine.

Dr. William H. Mansperger of Buffalo has returned from a motor trip through the Adirondacks.

Dr. Lillian Craig Randall of New York City, formerly of Buffalo announces the removal of her office to 570 West 156th St.

Dr. George E. Blackham of Dunkirk had his left shoulder broken in an automobile collision. He was taken to the Brooks Memorial Hospital.

MILITARY PERSONALS

To Camp Custer, Capt. J. J. Vorbett, Syracuse.

To Camp Greene, Lieut. E. M. Trench, Buffalo.

To Camp A. A. Humphreys, Lieut. A. C. Abbott, Syracuse.

To Camp Dix, Capt. H. G. Germer, Canastota.

To Camp Jackson, Capt. Harry Weed, Buffalo.

To Fort Benjamin Harrison, Lieut. W. L. McCanty, Buffalo.

To Fort Oglethorpe, Lieuts. F. P. Schenkelberger, Gowanda; G. C. Barone, Buffalo; D. N. Cott.

To Fort Snelling, Lieut. I. A. Wentworth, Clifton Springs.

To Hoboken, Lieuts. W. H. Jones, J. P. LaDuca, Buffalo.

To New Haven, Lieut. J. L. Mangano, Buffalo.

To Rockefeller Institute, Lieut. D. Jung, Buffalo.

To Baltimore, Capt. D. S. Childs, Syracuse.

To Camp Beauregard, Capt. G. Priestman, Willard.

To Camp Shelby, Lieut. H. A. Patterson, Buffalo.

To Camp Wheeler, Capt. E. W. Ayers, Alfred.

To Fort Niagara, Capt. N. B. Ford, Owasco.

To Mineola, Capt. E. L. Hazeltine, Jamestown.

To Camp Crane, Capt. W. R. Thomson, Warsaw; Lieut. G. G Davis, Arcade.

To Middletown, Pa., Lieut. M. H. Goldberg, Buffalo.

Honorably discharged on account of physical disability, Lieut. W. W. Millias, Rome.

Dr. T. W. Price of Medina was wounded in action on the Vosges front in France on Aug. 24.

Dr. Arthur E. Mitten, formerly of Lockport, has been taken prisoner by the Germans and is in a prison camp near Karlsruhe. Dr. Mitten with other medical corps officers attached to Wisconsin regiments were forward to establish first aid stations. They were in the midst of the battle area and a shell struck near their machine, blowing it to pieces. It was not known whether Mitten was killed. Doubt as to his safety has been cleared up by the word from the Red Cross. Dr.

Mitten is a graduate of the University of Buffalo. After graduation he took up practice in Milwaukee. His wife lives there.

Dr. William Ward Plummer, of Buffalo, now in France, had been promoted to a majority on August 28th. He is now consultant to twelve base hospitals in the Saint Mihiel region. Dr. Plummer went abroad last October as a captain in a special unit of orthopedic surgeons headed by Dr. Goldwaite of Boston. He had attained distinction in that branch of surgery. For eight months Dr. Plummer was head surgeon in a big hospital in Leeds, England, and in the early summer was transferred to Southern France, where he had charge of a special training camp. In August he was called to the Saint Mihiel region and his promotion followed.

Major General Ireland has had his nomination as Surgeon General approved by the Senate.

Major Francis Fronczak of Buffalo represented the Red Cross when General Polo was sworn in as commander in chief of the Polish Army. The ceremony took place in the presence of the first Polish division, 80 per cent of whose members are Poles from U. S. General Polo and a number of his men deserted the Austrians last winter and escaped from Russia by way of Murmansk. This division is complete in every particular and has cavalry, artillery and hospital detachments. All the equipment came from U. S.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Edmund Townsend, Fairport, N. Y.; University of Buffalo, N. Y., 1885; aged 57; recently a surgeon on a steamer in the merchant service; who was operated on at the Primrose Hospital, Batavia, N. Y., in the early spring; died in Washington, D. C., September 4, from carcinoma of the stomach.

Dr. Lorenzo Burrows of Buffalo died in France on September 17th of bronchial pneumonia. Dr. Burrows enlisted in the Buffalo base hospital unit 23, in August, 1917, and sailed for France in November of the same year. He served with the rank of captain, but it has been stated, though not officially, that he was very recently promoted to colonel. Dr. Burrows was a graduate of the College of Physicians and Surgeons at New York City, and had for many years been a prominent

Buffalo oculist. He had distinguished himself as a philanthropist and among all medical societies. Dr. Burrows had been for some time previous to his departure a member of the staff of the General Hospital. He is lamented by a host of friends and professional associates.

Lieut. Harold Greene Porter, Assistant Surgeon, U. S. N. R. F., Syracuse, N. Y.; University of Syracuse, N. Y., 1901; aged 25; a Fellow of the American Medical Association; on duty at the Naval Hospital, Chelsea, Mass.; died recently from influenza.

ABSTRACTS

Medical Problems of Aviation.

A. BERNARD, Le Progres Medical, May 11, 1918.

Racial aptitude plays a factor, especially in regard to habits of sportsmanship. Analogously, the cavalry is more likely to furnish candidates than the infantry and, till recently, Germany has drawn almost entirely on the former. Good aviators are always bad sailors, on account of the development of the sense of equilibrium. The best age is from 18 to 30. Weight and height are of little importance but the height should not be less than 1.55 (about 62 inches) or the aviator will have difficulty in looking over the sides of his cradle. Deformities and surgical lesions are of indirect importance, as in affording a subsequent pretext for leaving the air service, in interfering with the solidity of the abdominal wall since the displacement of the viscera in a sudden manoeuvre leads to syncope or lypothymia. Thoracic lesions are of importance mainly as they interfere with respiration as the oxygen is diminished by half at 5000-6000 meters. Anyone who cannot hold the breath at full inspiration for 45 seconds after full exhalation is unfit and most good aviators can hold the breath for a minute without discomfort. Injuries to the head are also likely to be significant, though not necessarily, by indicating cerebral change such as to cause slowness of perception, rapid fatigue, exaggerated emotional state, or sensibility to changes in atmospheric pressure. So far as the limbs are concerned, it must be remembered that almost all motions of the aviator require the action of the arms and hands above the shoulders. Amputation of the leg may not interfere with the functions of the pilot as an artificial limb can be attached to the pedal. Limitation of ankle movements leads to assignment to a hydroplane or aeroplane less rapid than a chaser. Subjects who have had infantile paralysis are barred because they are predisposed to trophic troubles excited by cold.

Excessive use of tobacco, alcohol, or other drugs bars from the service but teetotalism is not insisted on by all though none allow tobacco or alcohol immediately before flights. Syphilis and malaria, properly treated, do not bar from service. Epilepsy, tuberculosis, bronchitis, pleurisy, asthma, do. Seasickness does not bar (nausea from test movements in the Barany chair being rather considered as an index of delicacy of the sense of equilibrium) as it is rarely encountered during flights though some pilots vomit after landing. Sugar and albumin in the urine are positive disqualifications. All forms of cardiac disease and functional disturbance disqualify as do even conditions of unstable vascular equilibrium, Raynaud's disease for instance predisposing to frost bite.

Nervous instability as indicated by exaggerated knee jerk, tremors, insomnia and agitation must be carefully excluded, there being a special malady known as aeronurosis.

Vision should be perfect, without lenses, as the latter may be broken or clouded. Some candidates with defective vision have adapted themselves and become excellent pilots. Not only must vision be perfect in the ordinary military sense but it must be perfect for both eyes together and for each separately; stereoscopic vision must be good to allow for estimating distances, color sense to distinguish insignia, signals, etc., night blindness must be excluded; larval cases of hypermetropia and astigmatism may cause bad landings.

Deafness of either ear disqualifies, not so much because the aviator depends on observation of sounds but for the very simple reason which is apt to be overlooked even by those accustomed to the use of automobiles: it is absolutely necessary that both pilots and even mechanics who do not fly shall be able to hear how the engine is working. Deviation of the nasal septum tends to bad headache on landing. Large tonsils or other causes of mouth breathing are serious as predisposing to anginas, especially from the wind of helices in front. Otitis meda suppurativa, perforation of cicatrix of the drum rejects, partly because painful affections may develop from the noise of the motor or sudden changes of altitude.

Equilibration and muscular sense are highly important yet it must be admitted that the orientation depends largely on the eyes, skilled aviators often finding that in clouds, they have been flying with one wing low or have been mounting or descending without realizing it. Graeme Anderson, bandaging his eyes, undertook to describe to the pilot, by a telephone, the changes of direction and found that while at first his descriptions were correct, he soon lost the power to orient himself. The various Barany tests and use of hot and cold water in the ears are alluded to briefly. A rough substitute for the chair is to blindfold the candidate and have him spin on one foot.

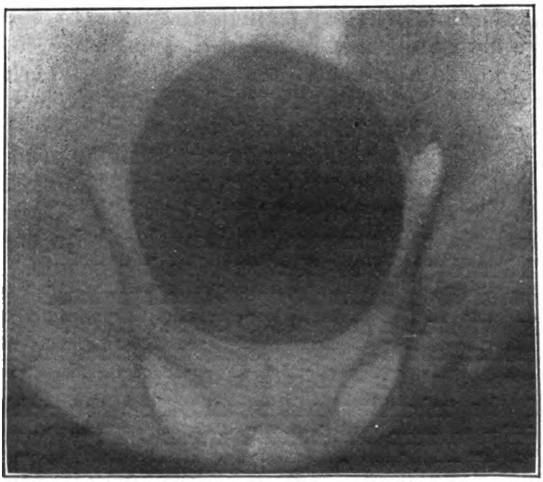
Psycho-motor tests depend largely on chronometer studies of response to various reflexes, as a revolver shot, moving needle or a touch of the head or hand. Hipp's chronoscope and d'Arsonval's chronometer are mentioned. Gemelli also has a modification. The normal response to visual stimuli is 0.19 second, retardation 0.22-0.45; to auditory 0.14, retardation 0.20-0.39; to tactile 0.14, retardation 0.20-39, these retardations being abnormal but apparently actually observed at times. Emotional tests. The aviator should not show undue reflex response to stimuli in the respiration and circulation, for obvious reasons. The test is usually made by recording the reflex from a revolver shot on drums. Tachypnoea and vaso-constriction, while normal, should be of short duration. Power of observation—attention—is tested by Rossolimo's method.

The medical examination of aviators cannot be terminated by a preliminary test, however thorough but must continue during the training period. The surgeon on duty at an aviation camp must also study the causes of every accident and try to determine methods of avoiding them, as well as develop methods for prompt medical and surgical aid. He must also study the psycho-physiologic reactions of each student, especially in regard to pulse, arterial tension, respiration and audition and equilibrium. Delicate recording apparatus is desirable. The pulse is notably accelerated up to heights of 1000 meters, slowed from heights of 1000 up to 1400 meters, then again accelerated. It is accelerated by changes of momentum. In descending, it is first accelerated, then slowed. Respiration in general follows the change of frequency of the pulse but is always accelerated by altitude on account of the diminution of oxygen in a unit volume of air. Arterial tension diminishes up to 300-500 meters, then rises slowly. It is diminished in descending. In mounting, up to 1500 meters, all the upper respiratory passages and even the ears, become congested. Relief is obtained by deep breathing and Valsalva's experiment. These troubles disappear at 4000 meters, re-appearing on descending. More or less deafness and even bleeding from the ears occurs on landing. These troubles, due to differences in atmospheric pressure, are more pronounced if the aviator has some degree of otitic sclerosis, malformation of the nasal fossae, etc. In mounting, Valsalva's test and in descending, Toynbee's, should be employed. Complete rest for 15-30 minutes after landing is very useful and a month's rest causes the disappearance of persistent troubles of this nature.

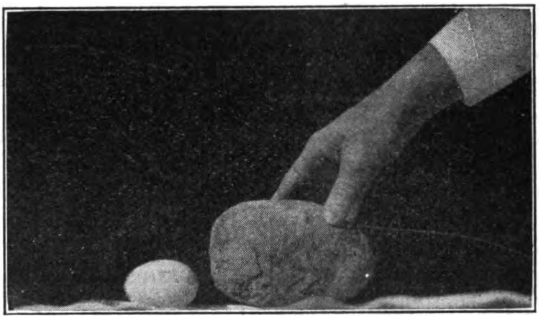
The causes of accident are very numerous. Defects of parts of the aeroplane are now rare. Stopping of the motor is no longer a cause of death if it occurs at a sufficient height so that the pilot may volplane and choose a suitable landing place but it is dangerous at small distances from the ground and especially shortly after starting. Among 58 accidents collected by Graeme Anderson, 2 occurred in the air and 46 in landing which is the bete noir of aviator students. In general accidents are due to an error in judgment or to a defect of binocular vision on the part of the pilot. Nervous fatigue, especially and quickly developed in the inexperienced, is the principal cause of "losing one's head." Thus short flights should always be enjoined at the beginning.

To provide immediate assistance in case of accident, every camp should have an observer who communicates by telephone to the surgeon on duty who has an automobile in readiness with a fully equipped surgical and medical chest. A very practical addition to this is a tool kit including cutting pincers, hammer, fire extinguisher, etc. The camp is divided into sectors with established boundaries, in order to locate accidents without delay.

Vesical Calculi. C. E. Park of Prae, Siam; Int. Jour. of Surg., April, reports a native farmer, aged 24 who received a wound of the thigh 4 inches below the pubic bone, 12 years previously, in diving and striking a snag of teak wood. The wound discharged for a year; thereafter there was no complaint except of slight pain in the lower quadrant of the abdomen on exercise, till 3 years ago when dysuria and foul



urine were noticed. The urethral sound clicked against a calculus which was operated upon. The calculus was encysted in a cancerous mass. The stone measured 2½x1¾ inch and weighed 4 drachms and had as a nucleus, a piece of teak 1¼ inch long. The patient recovered from the operation but died later of cancer.



D. W. MacKenzie of Montreal reports a calculus in a farmer aged 55, symptoms dating back 20 years, palpable bimanually, demonstrated by X-ray and successfully removed. It was ovoid, 17½ to 12½ inches in circumference, weight 38½ ounces.

Lipolysis and Bacteriolysis of the Tubercle Bacillus. E. A. Bossan and E. Le Moignic, Le Prog. Med., Mch. 23. Metchnikoff and Metalnikoff have called attention to the immunity of the honey-comb mite, which they ascribe to a specific lipase. Deycke, Much and one of the authors have shown that the envelope of the tubercle bacillus as well as of the non-pathogenic streptothrix leproe, contains a resistant wax which, injected into a tuberculous organism, produces active antibodies. They were unable to obtain satisfactory biologic results, as the attempt at extraction with hot xylene, boiling alcohol and ether decomposed too much of the bacillary contents and largely prevented a vaccinating power. Deycke, in 1906, showed that, in analogy with albuminoids and lipoids, the fatty substance extracted from acido-resistant bacilli (named nastin) could produce specific antibodies. The authors have shown that Le Moignic's oily mixture dissolves the waxes of the tubercle bacillus and that the acid resistance falls rapidly to zero in about 3 weeks. They have employed two kinds of vaccine, a complete suspension still containing the bodies of the bacilli, and one freed from bacilli by filtration. Using the latter in guinea pigs and rabbits, lipolytic and bacteriolytic anti-bodies were produced. Controls died 3-4 weeks after injection with tubercle bacilli. The vaccinated animals survived several weeks to several months after the injection of 3 centigrams of very virulent tubercle bacilli. Cultures to which blood from vaccinated animals was added, after even 12 hours incubation at 37 deg. showed morphologic changes, with development of 2-4 very darkly staining granules connected by a lighter-stained filament. Bacilli with a single granule at one end resembled spermatozoa. Some bacilli took the couter stain. Similar appearances were found in bacilli from the vaccinated and infected animals. They imply that the obstacle to successful therapeutic use of the extract of bacillary waxes in Le Moignic's oily mixture, is that the production of lipolytic and bacteriolytic antibodies does not directly destroy the vitality of the bacilli, experimentally or accidentally introduced.

Haemothorax and Empyema. Lt. Col. Dobson, Brit. Med. Jour., Feb. 2, after performing pleurotomy at the site of election and evacuating the pleura, introduces a curved canula in the mammillary line in the 3d or 4th space, the canula ending blindly but having a dozen lateral openings. An antiseptic is introduced by a fountain or bulb syringe and drainage is effected through the drain behind, in the pleurotomy wound. J. Campbell, ibid. Jan. 26, fills the pleural cavity with Dakin's solution and withdraws it after 2 hours, repeating the process several times a day. Failure indicates a foreign body, a septic clot or the formation of an intrapulmonary abscess. He claims to have abridged the process of healing very considerably.

Thoracic Wounds—Experience at an Advanced Surgical Center. A. Rees and Gerard S. Hughes, Lancet, Jan. 12, report on 140 chest wounds. Primary haemorrhage is the principal cause of death early. This is due mainly to bleeding from the intercostal artery but also to that from the pulmonary vessels. While the latter is arrested by pulmonary collapse, the tamponment of the vessels by the blood collected in the pleural cavity cannot be efficacious till a very abundant, even fatal haemorrhage has occurred. In widely open wounds with trauma of the lung, 27 deaths occurred in 44 cases—61%. If the wound is not closed in 48 hours, infection is inevitable. Simple lavage is often sufficient to close a small open wound. Tamponing is insufficient in large wounds and dangerous on account of liability to sepsis. Suture of the wound, with or without extraction of the projectile is to be recommended in all cases of open wounds for infection of the pleura can be avoided in half the cases. The operation is done after shock has passed, under light general anaesthesia with chloroform and warm oxygen. Extraction of projectiles from the pulmonary parenchyma and suture of the visceral pleura prolong the operation and should not be practiced as a rule. Closed wounds (haemothorax and pneumothorax closed): 72 cases, 14 deaths, 19.3%. The complication to be feared is infection, indicated by the persistance of tachycardia, fever and acute pain on percussion of the wounded side.

Acute Non-Suppurative Encephalitis. Creyx, Jour. de Med. de Bordeaux, Mch., reports a case fatal after 4 days, temperature ranging from 40 to 42 (104-107.6 F.) in which syphilis, typhoid, tuberculosis, diabetic and nephritic coma were excluded and blood cultures negative. No exact etiologic diagnosis made. According to etiology, he submits the following classification: Malarial, Syphilitic, Hydrophobic, Disease of Heine-Medin, Tuberculous, Streptococcic, Straphylococcic, Pneumococcic and infections with other bacteria, not specific. In case of association suppuration is the rule. As to symptoms and localization, he classifies thus: Diffuse—delirious, convulsive, comatose. Focal—partial epilepsy, localized, choreiform movements; Paralyses characterized by syndromes varying according to level of the neuraxis—cortical, meso-cephalic, Wernicke's acute superior polio-encephalitis, bulbo-protuberantial, acute bulbar, cerebellar; participation of the spinal marrow—encephalo-myelitis. According to age: Foetal (Little's Disease?), Infantile, common syndromes of infantile hemiplegia or diplegia—Chorea of Sydenham, Milan, Grabois?, sequellar forms presenting a number of destructive and cicatricial localizations, Encephalic forms of certain sceroses in plaques.

Comparison of Percussion and Roentgenograms of Pericarditis. Morris and Bader, Arch. des Mal. du Couer, Feb., mention the dispute as to the accuracy of the former method, especially as to the limits of effusion detectable by percussion. They have experimented with 4 cadavers, the pericardium being injected with 250 c.c. at a time up to 1500 c.c., the usual maximum of distensibility. The first change in percussion was noted above, when 250 c.c. had been injected. Retro-sternal dullness was detected with 500 c.c. except that in one cadaver it failed with 750. An obtuse cardio-hepatic angle could not be obtained even with 1500 c.c. The liquid was first detected by the X-rays at 150 c.c. In the sitting posture, both retro-sternal dullness and the enlargement of the shadow disappeared by gravitation. Regarding the maximum quantity of effusion, they quote Verney as having obtained 4000 c.c. while Sibson gives the total capacity of the normal pericardium as 420-660.

Thoracic Wounds—Infected Haemothorax. Wm. Hutchinson, Brit. M. J., Feb. 16, reports a total of 450 military cases with only 29 deaths. In uninfected haemo- and pneumothorax, aspiration should be done and is usually sufficient if the dullness does not exceed two fingers' breadths. If the effusion of blood is massive, the pleura should be opened as soon as possible and the liquid blood and clots removed and the cavity irrigated and closed. Open haemothorax should be closed as soon as possible. Early diagnosis of infection should be made, pleurotomy with resection of rib practiced, blood and clots removed, and irrigation should be done with an antiseptic leaving a small quantity in place and closing the cavity. In case of development of infection after aspiration or recrudescence after pleurotomy, the pleura should be opened promptly. Attempt at extraction of a foreign body should not be made immediately and, in the case of British troops, not till the patient has reached England.

Soap in War Wounds. Haycraft, Brit. M. J., Jan. 19, removes foreign bodies and dead tissue and cleanses with 25% soap solution. 91 of 98 cases thus treated and sutured primarily, healed by first intention. A few developed pyrexia and local reaction but returned to normal in a few days. He attributes a haemostatic action to the soap and, without claiming a positive antiseptic action, contends that it penetrates the crevices of wounds and removes debris mechanically. (Note: Some 30 years ago, a physician was discharged from a public position in Buffalo for having used soap suds in a case diagnosed as diphtheria. It may be that public sentiment owes a belated apology to him or his memory—we do not know which. At any rate, many isolated reports have indicated that, whether strictly speaking an antiseptic or not, soap may well supplant many antiseptics in numerous instances.)

Flora of Wounds in Relation to Secondary Suture. Fleming and Janes, Brit. Med. Jour., Feb. 9, found in 55 unsuccessful cases, streptococci, spore-bearing bacilli and anaerobes digesting the tissues and yielding gas having the odor of rotten eggs. On the other hand, when the culture did not yield these microorganisms, healing occurred even with 20-30 bacteria to a field. The authors, therefore, urge cultural studies before undertaking secondary suture. (Note: This communication is in line with various others based on war experience, dealing with the most diverse problems but all having the common point that we must get away from the conception of non-specific bacteria. The determination of the exact microorganism is of great practical importance.

Some of these studies even indicate that the differential diagnosis may be made clinically.

Hepatoptosis by Interposition of Intestine. Laurent Moreau, Prog. Med. Mch. 16, describes two cases, demonstrated by X-rays, by means of the clear space between the liver and the diaphragm. While very rare, this condition has been described by Beclere, Aubourg and Perussia, the three important factors being abdominal hyperpressure, gaseous dilatation of the colon and malformation of the liver. (Note: Clinically, cases are encountered in which, without malformation of the liver, and with a question as to whether hyper or hypotension exists, coils of intestine, not necessarily the colon, come somewhat in front of and above the anterior portion of the dome of the liver.)

New Method of Treatment of Elephantiasis. M. C. Walther, Le Prog. Med., Mch. 23, has successfully employed in three cases of elephantiasis of the lower limbs, an artificial supplementation of the lymphatic circulation. A small rubber drain, without lateral perforation, is placed by means of a Chassignac trochar in the deep layer of the subcutaneous cellular tissue, short circuiting the zone of arrest of circulation. At the extremities of the tube, it is button-holed through the aponeurosis into the subjacent space and fixed by a linen suture. He mentions a case of elephantiasis of the arm due to a war wound, with cicatrization. The ability to move the arm returned but the oedema persisted. In the cases of elephantiasis of the lower limb, complete cure was apparent at the expiration of 8-20 months.

Cod Liver Oil Substitute. Col. J. S. Purdy, Brit. Med. Jour., calls attention to the mutton bird or smoky petrel whose migration is between the Antarctic and New Zealand and Australia. The oil is used by the natives and the author has employed it in tuberculosis. (Note: We have long been sceptic, first of the special value of cod liver oil, secondly, of the value of a high fat or any other unbalanced ration in tuberculosis, although a moderate excess of nourishment is demanded. However, when fat has shown its importance both as a food and as a war material, by the shortage in Germany any source of fat is welcome. E.)

Complete Transposition of Viscera. Colard and Couturier, Arch. Med. Belges, Feb., describe the demonstration, largely by X-rays, of two cases in soldiers. (Hats off to the Belgian profession for maintaining a medical journal under their present handicap).

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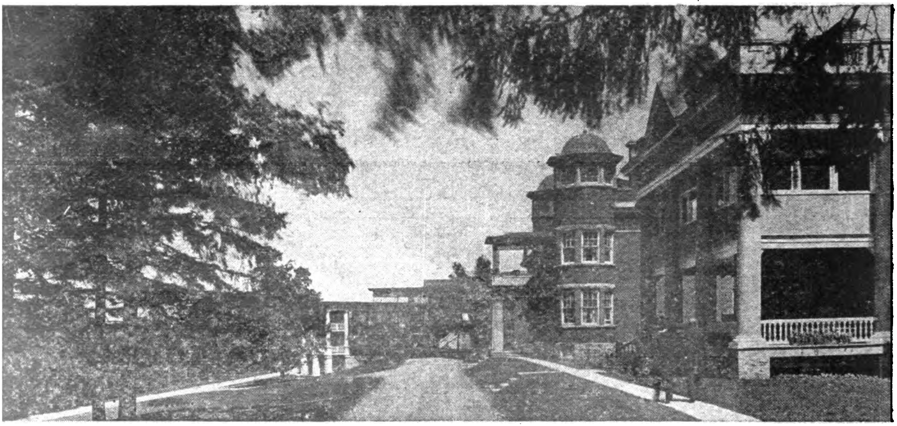

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CONTENTS FOR DECEMBER, 1918

Editorial

Important Announcement 159
Military Favor Toward the Medical Profession 161
The Real Hardship of the Medical Profession from Military Service 163
War Psychology 165
Why Split Fees 168
Post Bellum Immigration 171

Originals

As to Influenza. By George F. Cott, M. D., Buffalo, N. Y. 175
Podalic Version. By P. W. Van Peyma, M. D., Buffalo, N. Y. 183
Three Cases of First Labor in Women with Congenital Dislocation of One Hip. By Mary G. Haskins, M. D., Detroit, Mich. 189

Book Reviews 174
Topics of Public Interest 193
Personals 195
Military Personals 196
Obituary 199

Abstracts at end of original articles and on advertising pages.

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INDEX TO ADVERTISEMENTS

Manufacturers of Drugs, etc.

Battle & Co.	24
Bayer Company, Inc.	13
Breitenbach Company	15
Bristol-Meyers Co.	23
Carnrick Co., G. W., New York	3
Daniel, John B., Inc.	24
Denver Chemical Co.	15
Dios Chemical Co.	7
Dugdale, Frederick	25
Fairchild Bros. & Foster	Front Cover
Farwell & Rhines	4
Fellows Medical Mfg. Co., Inc.	16
H.-O. Co.	Cover page 2
Katharmon Chemical Co.	8
Mellier Drug Co.	11
Mulford, H. K., Co.	19
Od Chemical Co.	9
Parke, Davis & Co.	Cover page 4
Peacock Chemical Co.	14
Purdue Frederick Co.	Cover page 3
Richardson Co.	9
Sherman, G. H., M. D.	24
Smith, Martin H.	10-25
Southport Chemical Co.	5
Sultan Drug Co.	22
Tilden Company	13

Instruments, Prosthetic Appliances, Lenses, etc.

(Buffalo unless specified)

Davis & Geck, Inc.	25
Electro Surgical Instrument Co., Rochester	5
Fox, Geo. R., Optician	23
Kredo Co., Auburn, N. Y.	25
Storm, Katherine L., Philadelphia	9

Druggists

(Buffalo unless specified)

Brooks Pharmacy	25
Kreuz, Peter J.	25

Automobiles and Supplies

(Buffalo unless specified)

Eisenhans Battery Exchange	25
Emery Mfg. Co., Bradford, Pa.	25

College

University of Buffalo—Dental Dept.	12
University of Buffalo—Medical Dept.	12

Hospitals, Sanitariums, Hotels

Chalfonte, Atlantic City	26
Glen Springs, Watkins, N. Y.	26
Homewood Sanitarium, Guelph, Ont., cover page	2
Marshall Sanitarium, Troy, N. Y.	26
McMichael's, Dr. Sanatorium, Buffalo	26
Steuben Sanitarium, Hornell	26
Waukesha Moor Baths, Waukesha, Wis.	16

Milk, Etc.

(Buffalo unless specified)

Borden's Condensed Milk Co., N. Y. and Buffalo	10
Wheat's Ice Cream Co.	21

Undertakers

(Buffalo unless specified)

Sauerwein, Henry	4
Farnsworth, W. H.	4
Schlager & Son	4

Miscellaneous

(Buffalo unless specified)

Brainard, Harry, Insurance	23
Connor, R. H. & Co.	4
Desbecker	25
Samuel Newman, Tailor	23
Scheuerman Co., Inc.	10
Worthington & Sill, Insurance	4

Water

(Buffalo unless specified)

Hudor Co.	21
Creditors Commercial Corporation	14

Publishers

Albany Medical Annals	23
Detroit Medical Journal	21

BUFFALO MEDICAL JOURNAL

A Monthly Review of Medicine and Surgery

Owing to the uncertainty as to the duration of military service and the comparatively frequent change of stations, the retiring editor, Dr. A. L. Benedict, requests that all communications regarding the Journal under his management, which ceases between the December and the January issue, be directed to his permanent forwarding address, 126 N. Pearl St., Buffalo.

Yearly Volume 74 DECEMBER, 1918 Number 5

Important Announcement!

Beginning with the next, January 1919, issue, this journal will be taken over by and merged with the **Medical Review of Reviews.** Thus, for a second time, it goes to New York, the first removal having occurred when the first Editor and Founder, Dr. Austin Flint, changed his residence from Buffalo.

In vacating the Editorial Chair, it may be allowable to speak quite frankly and personally. Shortly after the death of Lt. Col. William Warren Potter in March 1911, the suggestion of assuming the management of the Buffalo Medical Journal came from several sources. In spite of considerable experience with various forms of editorial writing, especially with the Medical and Surgical Reporter of Philadelphia, the Medical News and the Medical Times of New York, the idea of assuming the entire responsibility for a journal was somewhat alarming. After assisting in the conduct of the Journal for six months and trying out on a small scale the prosaic but extremely important duties on which the success of any periodical depends, after having tried to induce others to take up the work which Dr. Potter and, during the last part of his life, Miss Margaret Bowden, had carried on from 1888, it was decided either to carry on or wind up the Buffalo Medical Journal.

It may be frankly stated that this decision depended largely on a personal veneration for antiquities and the realization that the handicap of America in this respect can be overcome only by carefully preserving institutions that are half a century or more old. As **only two other** medical journals extant on the American Continent surpassed the Buffalo Medical Journal in age, local pride added to the former consideration.

For a magazine of local scope and whose excuse for existence required it to remain local, this Journal has been a decided success throughout the seventy-four years of its existence. This success has been due to the very cordial cooperation and support of the profession of New York State and of the firms to which any periodical must look for its main financial support. Of course, the ambition was maintained to go very far beyond local usefulness and it was somewhat disappointing that Buffalo was not regarded more as a medical center. However, it is particularly gratifying to learn from the Publishers of the **Medical Review of Reviews,** a publication of national scope and circulation, that this Journal has not only been unusually successful as a local medium but has measured up to the standards of many of general scope.

With nine of the thirteen members of our editorial staff in military service, the continuance of publication for the last twelve months has been possible only because of the unusual ability and willingness of two persons, Mr. Alf. E. Tovey, the printer, and Mrs. A. L. Benedict, to assume burdens naturally devolving upon the managing editor. The gradual increase of demands of the service up to a standard usually considered impossible in civil life, has correspondingly reduced the opportunity to maintain a reserve of material for publication or even to advise as to matters of general nature. Even before the war attempts were made to interest others so as to afford insurance against too great dependence on one life. These attempts having failed in Buffalo, the kind offer from New York to preserve the identity of the Buffalo Medical Journal with the progressive **Medical Review of Reviews,** has been accepted.

It is highly gratifying that the surrender of complete local maintenance of the Journal is the direct result of war conditions and not even in the economic sense of serious impairment of either subscriptions or advertising, such as usually leads to similar mergers.

The Buffalo Medical Journal passes into new hands in a prosperous state with its quality unimpaired, rather enhanced by the fact that it has had to depend for the last year, even more than normally, upon the collaboration of many of its friends.

Most of our readers are familiar with the **Medical Review of Reviews,** which, being a much larger magazine, contains many features not contained in the Buffalo Medical Journal. One of the special features of the **Review** is its Index Medicus, which lists each month the titles of every medical article published in practically every medical journal in the world, together with the author's name, date and place of the publication, etc. The **Review** is the only publication in the world containing such a department. It is also the only publication which contains a department devoted to diseases of old age.

Beginning with the January issue, when the Buffalo Medical Journal will be absorbed by the **Medical Review of Reviews,** the combined journal will contain 112 pages monthly and promises to offer to the medical profession the best to be had in American Medical literature. The subscription price remains $2.00 yearly and we sincerely trust that every subscriber to this Journal will renew with the **Medical Review of Reviews,** 206 Broadway, New York. Unexpired subscriptions will of course also be filled by the combined journal.

We bespeak for the new management the same cordial and generous support that the journal has enjoyed in the past.

A. L. BENEDICT.

Military Favor Toward the Medical Profession.

We have, in common with most medical journals, and in a proper spirit, called attention to the sacrifice demanded of the medical profession, in particular. It is worth while to present the other side of the case.

Excepting the clergy, the medical profession is the only vocation whose services are asked solely as commissioned officers. Even medical students who were bona fide matriculants at the beginning of the state of war, are practically exempt from the draft and first year students who are drafted, will be allowed to serve in the hospital corps and will probably receive non-commissioned rank if at all eligible. A great many men are not afraid of death and without being swash-bucklers, desire military service, some as a matter of pure patriotism, some because they would rather be ancestors than descendants, veterans instead of sons or great great grandsons, some from love of excitement, at least for the sake of getting out of a rut, some to get away from non-peaceful peace conditions of one kind or another. To such men, the extended age limit and liberal allowance for physical defects is a favor. And there have been enough such to render the service of the profession as a whole, entirely voluntary.

Again excepting the clergy, whose status and numbers are quite different, the medical profession is the only vocation which enters military service on the basis of its normal daily work and without the requirement of preliminary military training. Of course, whenever practicable, this preliminary training is given but it is not absolutely required. When required, the medical volunteer undergoes training on full pay instead of at his own expense or on private's pay. In many instances, preliminary training takes the form of post-graduate courses which, before the war, were expensive to the student and sometimes almost unobtainable without special influence. Excepting inevitable records, formalities and peculiar cases, the military service of the physician is, in iself, a preparation for further private practice. The recognition of specialties and subdivision between surgical and medical work renders this particularly true of the present war.

The medical profession called to military service is given higher rank and pay than any other profession or vocation. Yes, we know that every man in a rainbow camp may hope to become a general, just as every native born citizen may hope to become president; and that the physician can not rise beyond major—except by recent changes which will affect only a few, or unless, under extremely favorable circumstances, he is switched off to a career in the Regular Army Medical Corps. But the statement is correct in the average sense; and it refers to ordinary competence in one's own line of work and not to developing unsuspected talents along an entirely different line.

The average physician, called to military service, will have a larger income than in private life. Of course, you and I are making a tremendous financial sacrifice but we speak for the average professional income of the other fellow. If this statement still seems extreme, bear in mind the difference between what we charge on the books and what we collect, between the latter and what is left over after paying professional expenses. There are, of course, men whose military pay will be only a small part of what they have been accustomed to earn but such men ought to be able to live on their accumulations; and their devotion to the country's needs for a year or two or three, is a professional investment.

Statistics show that the mortality and disability of officers is higher than for privates and, contrary to expectation, that the medical officers have the highest risk of all. But the actual increased risk is not very great, indeed the entire military risk is only about half of the expected mortality in peace, and not even so great for the average age of medical officers, since the direct military risk is practically the same for all ages. It must also be considered that the hardships of medical officers can scarcely be so great as those of many of the line officers and that the former are nearest the source of both prophylactic and therapeutic care.

The Real Hardship of the Medical Profession, from Military Service.

Instead of indulging in general expressions of sympathy with ourselves, let us get down to the gist of the matter and concentrate on an effort to secure such relief as is really needed. The medical profession may be heroic, stoic or mercenary but the only serious apprehension that has been expressed sincerely and repeatedly, is as to the financial condition of the medical reserve officer when the war is over. It is not the fear of being killed or even of being mutilated or blinded, nor the difficulty of living and supporting a family on the pay of even a first lieutenant during the war that troubles the medical profession, but the re-establishment of a practice after the war. For reasons that need not be discussed for members of the medical profession, this reestablishment is a much more serious matter than for the man in any capacity who has simply given up a job and who expects always to support himself by a job of one kind or another. It is more serious than for men having independent businesses, unless they are the sole managing force in that business and men thus circumstanced will probably be exempt. It is a problem that is automatically met, at least to a large degree, for teachers, clergymen, engineers and many other professional men leaving their ordinary employment for military service.

The problem, even for the medical profession can be reduced by the elimination of certain factors. Granting that the war lasts only for about six months, even a little longer, one need not worry much about re-establishment of practice. Experience has shown over and over again that an absence of this duration, taken as an occasional vacation, a few times during one's life, or for post graduate study, or any other valid reason, does not materially injure a practice. We can eliminate the men, with or without dependents, who have not really established a practice. They have to undergo this ordeal anyway and they will have an easier time with the experience and prestige of military service and the savings which they ought to make from their pay, than under ordinary peace conditions. We can also eliminate the men of extraordinary reputation who, whatever they have sacrificed during the war, will return to peace practice with added experience and prestige. And, of course, we can eliminate those —a small minority of the profession—who happen to be endowed from any source, with sufficient means to render them wholly or mainly independent of practice.

The problem is thus reduced to men of various ages between 30 and 50, as approximate limits, mainly with dependents—and a man without dependents can always get along somehow—whose average professional earnings correspond fairly well to the range of pay from first lieutenant to major, who have good professional reputations and established practices, but who are not famous, and whose living has not depended on the particular lines of practice which will be especially benefitted by military experience. The problem will be especially hard for men still far short of the retiring age in peace but near enough to it so that they will be liable to a considerable degree of physical deterioration from military service and who, even in the absence of such deterioration, will be regarded as out of place in the struggle of building up a practice.

We have no faith in the theory of holding together the practice of the absent physician. Permanent family clienteles are rare today, except in very small villages from which medical officers will be drawn only in exceptional cases, or persisting for a few of the older physicians in cities, these men being in most instances beyond the age limit of service. It is very easy to formulate a scheme for preserving intact the practice of a physician absent on military duty and we do not question but that the profession would undertake such a scheme in good faith. But it will fail, first because such a practice is the exception, secondly because when it exists, its individual components can not be endorsed over to some one else, like a check.

The only practical ways of meeting the problem that we can suggest are these:

1. After six months' service, give the medical reserve officer the same privilege of retiring on reduced pay that is accorded to members of the regular Medical Corps, but with rigid insistance on adequate physical reasons.
2. After the same length of service, give him the same permanence of appointment, provided his services are satisfactory. If they are not regarded as satisfactory for permanent employment but as sufficiently good in an emergency, give him the choice between immediate resignation and a continuance which he definitely understands to be at the option of the government.

Permanent employment does not by any means signify lifelong service. Any officer is free to resign unless his services are needed at the time. It is scarcely probable that any overwhelming number of medical reserve officers, at the end of of 2-5 years service, would desire to stay in the service. Even if 10,000 remained, as a dead-weight on the hands of the government, the expense to the government would be only about $25,000,000 for the first year and this amount would be rapidly diminished by death and voluntary resignation. If we establish universal military training or anything approaching it after the war, a large permanent medical corps would be required. If not, at least by co-operation with the state governments, some form of useful work can be found for the largest number of medical officers conceivable as desiring to remain in government employ. Such work would easily be worth to the country, the $25,000,000 estimated.

War Psychology.

One of the remarkable things in most, if not all wars, is the development of racial hatred and its extension to personal feelings, and its disappearance or mitigation after peace is established. Long before the present war was seriously contemplated, at least outside of Germany, an American largely of English descent, spoke affectionately of visiting his mother country. He was rebuked by an aunt, old enough to have had personal acquaintance with Revolutionary soldiers, but even more strongly of English blood, who expressed her hatred of England. At the outbreak of the present war, a long and warm friendship was broken off by an American citizen, born in Germany, with another American citizen, born in Canada of German ancestry. Very recently, an acquaintance half German in ancestry planned to visit a school friend in N. Y. of entirely different ancestry but married to a resident German citizen. Friends and even strangers, whether themselves of German blood or not objected to this visit on patriotic grounds. They were themselves, breaking off friendship with Germans, even with persons of other nationality who had ties of marriage or friendship with Germans; and they accused western N. Y. and other inland areas of apathy because the paeon of hate had not been started. To our mind—at present—the worst feature of the war has been, not the war itself nor the inevitable suffering even when imposed on countries not themselves immediately implicated in the political disputes and supposed to be protected by neutrality, but the personal venom manifested. We can even excuse brutality to non-combatants and neutrals, needless destruction of religious edifices and business structures and homes and wanton defilement and loot of private possessions, so far as these can be charged to individual, personal depravity. One cannot expect the extreme of chivalry in modern warfare nor the entire impersonality of attitude toward an enemy but it is to be hoped that personal hatred and harsh treatment of enemies, especially those who are merely nominally so and are actually peaceable residents if not citizens will be conspicuous by their absence in this country.

Incidentally, we rather think that a nation that can fight without hatred and without reprisals, without adopting barbarous methods of warfare even if the enemy does, will put up a good deal stiffer front and will certainly exert even toward the enemy a greater influence for a favorable and permanent peace. Consider, for example, the military careers of Grant,. Jackson and Lee.

With the exception of submarines, it is notable that the modern methods of warfare, which have been most denounced, have proved costly, inefficient and relatively easy of defense. The exception noted is really no exception when we consider that it is of no value except in violation of established international law and only because circumstances have made it a weapon that could serve on only one side of the controversy. Any of the older methods of war turned against neutral or enemy non-combatants in the same way would be far more efficient and if the Central Powers had had an equal amount of shipping, the mutual destruction would have produced a balance. The rather peculiar circumstances of the war have made the submarine a paying method in spite of the fact that in expense and liability to loss, it is far more costly than established methods. Even the suspension of the truce to bury the dead and the more or less formal recognition of the rights of parties rescuing the wounded, has not produced results of military value. At no time has the mortality from disease been so low nor the proportion of recoveries from wounds so high as during the present war. With the single exception, methods of war contrary to humanity have not paid.

The long discussion of the war during a period of neutrality has pretty thoroughly developed public opinion and the psychology of a people is, after all, a very strong military asset. In particular, the pros and cons of whether we were an Angliophile nation, have been discussed at length, and the time is ripe to speak candidly on this subject instead of trying to cater to any particular element of the population. The fact of the matter is that, for some 40 or 50 years after this country was established, in spite of the attempt to destroy historic statistics, by magnifying the non-English sources of colonial immigration, our population was about 80% British and nearly all of this 80% was English. Our population is still about 50% colonial and, therefore, about 40% English—a plurality among all elements. In quite another sense, we must admit Anglophilia, as a nation. We have maintained the English language not only legally but by popular consent and, on the whole, it is better English than that spoken in

England, and certainly freer from dialectic differences and modern peculiarities. The political ideals and methods of our country have also been distinctly English in their essentials though borrowing even from the Indians in some particulars. In fact, it is doubtful if we would have had a Revolution if we had not been more English than England herself at the time.

We are at present admitting by the very practical and expensive method of guarding our vulnerable points, that the slightly restricted admission of foreigners is not without its dangers. On the other hand, equally practical and more pleasing evidence is at hand that the danger is numerically, very small. It has been clearly shown that the principal danger lies with the floating, unassigned and unattached element of the population that is neither seeking citizenship with us nor formally under the control and responsibility of foreign governments nor is, bona fide, traveling or in temporary residence so that it may be accounted for by such systems of registration as are conducted by most European governments. The advent of war has shown a psychic state better than perhaps we deserve. Large numbers of aliens have applied for citizenship and large numbers of those who cannot now do so because their native countries are at war with us have shown that their failure was one of neglect rather than deliberate policy, and appreciate the unfortunate position in which they now find themselves. The moral for the future is plain. Without in any way attempting to segregate ourselves, we should cease to be a No Man's Land for such as desire to shirk civic responsibility. Every stranger landing on our shores should be placed in some definite category. He should be known either as a traveler, as a temporary resident representing some foreign firm or organization or government, to which he is responsible and which, in turn, assumes responsibility for him or else he should be an immigrant turned over by his native government, with its full consent, to our own, for naturalization. There should be no indefinite alien residence, furnishing support and legal protection, with practically no allegiance nor responsibility to any government.

Many of us are deceiving ourselves today as to the psychology of the people with whom we are at war. We may well discriminate in stating that we have a quarrel with the government and not with the people but we need not imagine that we are dealing with a people ready to fly into our arms for rescue from their own oppressive government. It is the stern rather than the indulgent parent that commands respect and affection. The modern autocratic governments with which we are concerned have given their people more efficient, and much cheaper local governments than has our own democracy and it is the city or village in which a man lives that means most to him. These governments have, it is true, denied to the individual much of the political power which we nominally enjoy as individuals but which we largely shirk or, somehow, find turned against our own personal desires by those more skilled in its manipulation. The same governments have insisted on respect and service to the country and its representatives whereas we have allowed disrespect and neglect but most good citizens voluntarily render both respect and service, though perhaps all the more willingly because they are not insisted on. And, finally, let us remember that actual personal liberty, especially to do the things that moralists and reformers condemn, is in many respects greater in times of peace, under autocratic than under our own democratic government. Nothing is farther from our thought than to plead for the merits of autocracy or to intimate that we would exchange the privilege of criticising the president for the repeal of the Mann law and laws restricting the use of liquor. We are trying to make it plain that the great majority of the people of hostile nations, habituated to methods of control entirely different in spirit from those existing here, probably regard them as normal and proper. Their patriotism is probably as great as ours and we shall make a great mistake if we regard them as merely the unwilling tools of a hated government.

Why Split Fees?

"I HEREBY DECLARE that during such time as I consider myself eligible to the privileges of the Department of Hospitals and Dispensaries I shall conform to the principle not to engage in the practice of the division of fees under any guise whatever. By this principle I understand that I am not to collect fees for others referring patients to me, nor to permit others to collect fees for me, nor to make joint fees with Physicians or Surgeons referring patients to me for operation or consultation, nor knowingly permit any agent or associate of mine to do so."

The above pledge is rightfully demanded of all appointees to the Attending Staff of the City institutions by the Department of Hospitals and Dispensaries of the City of Buffalo.

On the one hand this pledge should fill our hearts with shame as it lays bare a canker from which our profession is still suffering to a very large extent; on the other hand it reveals an economic wrong, an injustice to the hard working and underpaid general practitioner, which he has tried to remedy by the debasing and dishonest practice of the division of fees.

Without going into causes for this deplorable condition, which has been done time and again by other and abler pens, let us take up this matter in an academic way and let us see if a self-respecting and honest division of fees can be found.

One of our correspondents tells us that he has solved this question to his own satisfaction and that of the surgeons and consultants whom he calls in for aid in difficult cases; and this appears to us to be such a simple way out of a seemingly difficult situation that we recommend it for the consideration of our readers.

Our correspondent tells us that for the last fifteen or twenty years he has permitted the surgeon or consultant to fix the charges to be made to his patient and to collect these, while he himself charged the patient not less than 20% of this fee, aside from his other charges for visits and office consultations before and after the operation or consultation, and to specify this on the account for "diagnosis and presence at operation."

He has never had any objections on the part of his patients who were quick in realizing that this mode of procedure safeguarded them against overcharging on account of clandestine fee-splitting.

The surgeons and consultants knew beforehand that they would have to collect their own fees and those for their assistants directly from the patient and that they could, therefore, use their own judgment in fixing these. It also relieved them of a situation which at times was very embarrassing, namely, that they had to employ the general practitioner as assistant or anesthetist, so as to justify before the patient's family the fee which they intended to give him much as they would give a tip to a waiter or a railroad porter, when it would have been ever so much easier for them and safer for the patient if they could have brought their own tried assistants. Sapienti sat.

The above is contributed by one of our subscribers who wishes to be anonymous. In the general principle involved, we agree with it. We do not concur with the suggestion that any additional charge should be reflected to one man because of the services of another but, on the other hand, we believe that all professional charges whether medical or surgical, for consultant or attendant, by general practitioner or specialist, should be determined at their actual value, and not by the a la carte system of so much per call or office visit. It is almost unavoidable that the skill and reputation of the practitioner and the means of the patient should be considered in a charge but we do not regard as ethical, a plan by which one man secures a fancy fee in cash and another a routine fee on indefinite and dubious credit for the same case. Neither do we believe that the mere fact that a case involves a consultant or joint treatment, necessarily adds to its importance or to the charges appropriate, though a case that really needs consultation is usually worth more in fees than one that requires only one attendant.

It should be clearly recognized that no charge should be made surreptitiously; that, on account of professional dignity rather than an infringement of business honesty, no charge should be made, surreptitiously or openly either to a brother practitioner for getting him business or to a patient for securing him proper medical attention..

A clear cut distinction should be made between referring a practically independent condition to another practitioner and the joint attendance of several practitioners on a case that is a unit, so far as the patient is concerned. In the former instance, as when a patient is referred to a dentist, oculist, etc., by a family physician or another specialist, whether the patient is or is not being treated at the same time by the one referring him, each attendant should fix his own fee independently and assume the responsibility of collecting it. In the latter instance, as when surgical, medical and laboratory skill is united against a given condition, no arrangement is ethical which gives any one branch of practice an essential advantage as to amount of fee or time of collection, though this does not imply that the charge per unit of time spent or visit should be identical. Neither should the mere fact that one attendant has a more intimate acquaintance with the patient, personally or professionally, place him at a disadvantage. For these reasons, we believe that the best cure for the evils of fee splitting is on the basis of similia similibus. In other words, charge an adequate but not extortionate fee for the whole professional attendance on a given case, collect it as a unit and split it honestly and openly. This was done when congress paid the bill for the attendance on the late President McKinley and we believe in other somewhat analogous cases, and without complaint of violation of the code of ethics. Why should not the same course be pursued when the patient or his family pay the bill? Fee splitting of this kind is entirely different from the secret extortion of a percentage for throwing work to a consultant or from the slipping of a tip voluntarily—not to mention future favors by the man who can charge a fancy price to the poor devil who cannot. It seems to us fairer than the addition of a charge simply because of the fact of a consultation. Whether any definite system of dividing the fee could be worked out or whether the division would have to be made in each instance according to circumstances and depending on mutual fairness, can not and need not now be considered. The main point is that both ethical (?) and unethical graft and undignified methods would be excluded.

Post Bellum Immigration.

In a country which is probably 20% foreign by birth and half foreign in recent ancestry, it is an easy form of diplomacy to advocate unrestricted immigration. But such a view is neither sound citizenship nor in accordance with the views of the majority of the more or less foreign element. From the time of his debarcation, the interests of the immigrant are identical with those of every other resident of the country and it sometimes seems as if the most conservative attitude toward immigration is held by those who have been in the country but a short time relatively.

Many persons fail to realize the independence of the problems of immigration and of race prejudice. Let us illustrate from medical experience. Frequently, we encountered a case which, on close questioning, gives about the following history: a hearty luncheon at breakfast time, a dinner at luncheon, a banquet at dinner, a late supper, all sorts of dainties between meals, badly balanced diet, and mutually conflicting ingredients at meals. And after this history is dragged out of the patient he calmly says, "I think that pie, or pork, or ice cream"—as the case may be—"is bad for me." Let us turn to Uncle Sam's case. Up to 1820, there had been comparatively little immigration, except in a few areas, for over a hundred years. There are no statistics of immigration up to this date and, if there were, it would be difficult to analyse them with allowance for increase of population by annexation of large territories. Following this date, the immigration for each decade bore the following ratios to the population at the beginning of the decade: 1820-30, 1.54%; 1820-40, 4.659%; 1840-50, 8.22%; 1850-60, 10.82%; 1860-70, 7.56%; 1870-80, 7.293%; 1880-90, 10.46%; 1890-1900, 5,854%; 1900-10, 11.52%; and for the four years 1911-1914, 4.479%. It may be said in passing that while the foreign element in each decade would be augmented by propagation more than it would be diminished by death, one can not estimate the recent addition to American stock simply by adding these percentages together, in spite of the fact that they have increased probably more rapidly than the original stock. Without discussing the mathematic problem involved, it may merely be said that if anyone holds the contrary view, he can readily convince himself that it is incorrect by assuming that the present rate of immigration will continue for about 40 years more, when there will be the reductio ad absurdum of a population 105% foreign. However, the fact remains that there has been an enormous influx into this country from other nations. There is no disguising the fact that this has involved considerable trouble. But when Uncle Sam, or his spokesman, states calmly that the trouble lies with this or that European sub-race, he is making the same mistake as in the medical case cited. This statement requires only slight qualification since our entry into the war.

We are inclined to attribute very little importance to racial characteristics, exclusive of those of the five great divisions of mankind. Our conception of the term race, as applied to the European ancestry of most of us, is quite incorrect. Europe has been subjected to tides of migration even more complicated than that from Europe to America, and producing very much the same kind of mixture within a period which is, ethnically considered, not sufficiently remote to have resulted in any fixity of race corresponding to national designations. A simple and really scientific test of race prejudice is to note how far one can tell the nationality or ancestry of his associates, either from physical appearance or traits. Barring dialect and preservation of national customs in those very recently from Europe, he will make all sorts of mistakes, even assigning different racial attributes to members of the same family.

But freedom from race prejudice is quite another matter from advocacy of unrestricted immigration. It is beyond question that every race has its undesirable members, either physically or mentally. Even without regard to actual undesirability, it is not well for any country to have in its midst, any considerable number of individuals who are essentially foreign to it in language, habits, and prejudices, especially if these prejudices are against other ingredients of the population. Yet it should, in all fairness, be admitted that neither of these theoretic difficulties has produced the dire results in practice, that might have been anticipated.

But, the problem of finding a place and of securing, almost from the outset, a living for one person a year, added to each average group of 18 families is an economic problem which this country has not solved and which may well be regarded as unsolvable in a satisfactory way. During the present war, immigration has been slightly less than emigration. We shall have a chance to "catch up" on the immediate digestion of immigrants and the emphasis placed on the obvious advantages which our country presents at the present, will undoubtedly expedite ultimate assimilation. In particular, it will probably induce more permanent residents to become citizens, than before—and the number of persons who have hitherto enjoyed the privilege of life in this country without desiring to assume citizenship, is surprising. But, if as anticipated by many, this reduction of the essentially foreign element is followed by a tremendous rebound after the war, the condition will be even more serious than before.

One factor of special importance should be considered in this connection. Hitherto, this country has regarded itself and the immigrant as the only parties to the contract. At the close of the war, there will be a tendency to desert impoverished and wasted countries and to escape future military service. On the other hand, from the standpoint of the European countries there will be urgent need of people and especially of men. Even women will not be willingly spared since, in many European countries, they habitually engage in agriculture, manufacture and trade, to a greater extent than in America. There has already been some friction due to the conflicting claims of the country of birth and of naturalization or residence. Italy, we understand, extends this claim even to American born children of emigrants. Problems may arise as to the good faith of reservists who have not returned to their native countries, though for the most part, such return has been practically impossible. The military spirit and mobilization continuing after the actual cessation of hostilities may, not unreasonably, lead to the attempt to inforce claims on emigrants, at least diplomatically, which have hitherto been neglected or which have resulted merely in the arrest while visiting his native country of an occasional American resident or citizen. We feel strongly that even with regard to the ultimate status of the immigrant himself, it must be recognized that a third interested party exists—the country of his birth. Hence, we believe that all future immigration should involve the joint consent of this country and of the native country. The recognition of this principle will prevent various unpleasant contingencies. Even in countries which, from our standpoint—and that of most enlightened nations—have unduly oppressed a larger or smaller part of the population marked tendencies toward democratic ideals have already evolved and the way will be cleared after the war, for exerting influence to insure not merely the greater freedom and comfort of the few who can escape but of the vastly greater number who cannot emigrate. As a corollary to the proposition that all migration to this country should be approved by the native country, provision can be made for the more thorough inspection of prospective emigrants in Europe and, upon embarking, the emigrant can feel secure against exclusion at an American port, there will be no tragic disruption of families, no disappointed hopes at the last moment, no period of suspense, less opportunity for evasion of careful inspection.

BOOK REVIEWS

English, French, Italian, Medical Vocabulary. Joseph Marie of Philadelphia, P. Blakiston's Son & Co., Philadelphia. 112 pages, 50 cents.

This is a most useful dictionary with collections of phrases and various useful tables of weights and measures, etc. It is arranged alphabetically according to the English words. At first thought, it might seem that an alphabetic arrangement according to the other languages would be necessary but it is obvious that any one with any familiarity with them would be able to understand a medical expression but would not know just how to word it in translating from English. While appealing especially to surgeons in foreign service, it should be noted that this compend will continue to be of value after the war.

Manual of Physiology, G. N. Stewart, M. A., D. Sc., M. D., Published by Wm. Wood & Co., N. Y. 8th edition, 1245 pages, 492 illustrations and colored plates. $5.

We have reviewed earlier editions of this standard text book. It is difficult to comment upon a work so well known and so thoroughly established in professional confidence. Various recent investigations have changed somewhat the point of view especially in regard to internal secretions and ferments. It would perhaps be going too far to claim that radical discoveries have been made since the seventh edition but a clearer grasp of various subjects has been secured.

Arterio-Venous Aneurysm. Venot, Jour. de Med. de Bordeaux, Mch., describes a case involving the common carotid and internal jugular, due to a rifle ball (grazing wound implied as no note of haemorrhage) which also caused brachial paralysis. Extirpation, a month later, was successful, the aneurysm having been observed for about 4 weeks.

Urethral Stricture of Unusual Cause. Loumeaux, Jour. de Med. de Bordeaux, Mch., observed a case of 10-11 years duration, which had become nearly complete, with dribbling. He operated successfully. The patient had had no venereal disease and the condition was ascribed to repeated contusions in equitation, the man having done a good deal of bareback riding.

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ORIGINAL ARTICLES

As To Influenza.

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The present epidemic of Spanish Influenza recalls the great pandemic about 1889 followed by several minor ones since, during which the civilized world was swept quite thoroughly. Millions of cases occurred like magic in our own country. The disease ostensively had its origin in Russia and spread from ocean to ocean in a very short time. At that time the influenza bacillus was found to have been the source of the infection. Thousands of lives were sacrificed while most of the vast army of the afflicted recovered. But did they recover? Many undoubtedly did, but the greater number never regained normality. All those who apparently recovered would pass muster by the average physician, however, when closely examined it was found that the accessory cavities of the nose were still in a receptive mood; most of them, during certain seasons of the year, were subject to repeated "colds."

That great epidemic produced its fatal effect by way of pneumonia as does this present one, and the second result was meningitis.

The present epidemic may or may not be due to the bacillus influenza. In one camp the bacillus is found. In another camp the micrococus catarrhalis is the predominating germ, among others the pneumococcus is found. Whatever the cause the fatalities have been numerous. Some doctors find fatal issue only by way of pneumonia; others, toxemia, again others, both conditions prevail.

The infection makes its entry through the nose and mouth, that is commonly accepted, but it is not always that nasal symptoms are present. At first more often there is sore throat, however, great prostration is present in severe cases, leaving its effect long after apparent convalescence. In 1895 there were many cases of meningitis, always fatal, few of which have appeared at the present time. Neuritis of the cranial nerves with active suppurative sinusitis was common. Patients suffered intense agony. Whether the disease will cause chronic catarrhal quiescent or latent sinusitis this fall, remains to be seen.

Before 1889 very little had been written about sinus disease; partly because comparatively few cases existed and partly because there was no special reason for studying those cavities so generally. Since then, however, so many cases presented themselves that the literature is teeming with the anatomy, probable physiology, symptoms and treatment of sinus affections. I believe that in most cases of the Spanish Influenza that have recovered the sinuses will be found crippled, although many no doubt recover entirely. Physicians as a rule do not admit that the different sinuses of the skull are a causative factor, or even are involved, when certain symptoms exist which seemingly have no relation either immediate or remote to those cavities.

As early as 1911 I called attention to affections of the sinuses as factors in producing pain without any other symptoms, especially intracranially, which resisted all manner of treatment. These sufferers may never have had any discharge from the nose or down the throat, at least they never remembered it if they had, yet in most instances I could gradually by close questioning get them to recall having had a severe cold with profuse thick discharge from the nose. The rule is that the first attack of a "cold" causes prostration with headache or pain either mild or very severe, referred often back in the eyes, over the forehead, back of the head, over the temples (not the isolated temple pain spoken of by Patrick as indurative headache) or pain in the nose, accompanied by this discharge, after a few days becoming thick. All the symptoms may improve and recovery take place. The sensitive lining of the sinuses however does not usually resolve into its former status, but remains hypersusceptible. And from time to time symptoms recur in the shape of a "cold" which usually lasts several weeks. It is in these patients where a slow toxemia is often found. When such a patient presents himself looking anything but healthy, blood pressure may be found low (I have observed it to be as low as 90 systolic) and temperature 97 to 97½. They say they feel sick, no ambition, weak after slight exercise, etc. Now in what condition do we find the sinuses? Usually when there is no discharge, no apparent change is found in the mucous membrane in the nose, no bony or soft obstruction, no polypi, X-ray shows nothing; we conclude that there is no sinus disease. That is just where we make our mistake. All of these symptoms may be, and often are, absent. When a patient presents himself with either one of the following symptoms the sinuses are examined: intense headache, severe pain in the nose, eyes or forehead, over frontal region, in center of brain as they describe it, back of the head, or occipital region. Intense harassing cough especially at night; or several of these symptoms at one time, or complains of severe successive colds in and out of season, recurrent laryngotracheitis with cough, raising only small pieces of semi-solid secretion; or, where these symptoms occur periodically, the sinuses are suspected. Then the process of elimination begins. If a female, is there uterine trouble? The urine is examined for sugar, albumen and casts, blood count taken, a Wasserman made, teeth and gums as well as tonsils are scrutinized. I will eliminate hyperplasia of the mucous membrane of the sinuses, pus or polypi, for these at once direct our attention to the cavities; in the vast majority of the cases they are absent. Now if any abnormality in the nose is found as pressure of the middle turbinated bone on the septum, deviated septum, large inferior hypertrophy or simple intumescence, they should first be corrected but if they are not present, and the eyes examined and found normal, the region above the middle turbinate is cocainized and adrenalin applied (if no contrary indication). After five minutes a probe is introduced, which must be thin enough to pass between the turbinate and the septum; if the ethmoid is affected the probe will usually strike denuded bone. The frontal region may be likewise treated for this condition is mostly found where a large area is involved. After having applied this test, a number of times I found it necessary to open the frontal sinuses, the ethmoid cells or the sphenoid cavity. There was either no lining membrane present or it was found in a limited area only, especially in the frontal and maxillary sinuses. Sometimes part of the membrane was markedly thickened, or greater degeneration had taken place and the remainder of the bone was entirely denuded of its covering. Very often the symptoms are not accompanied by any discharge at all; the bone wherever touched seems dry and extremely hard as though having undergone a process of sclerosis. In fact the bone at times is so hard that the cells can hardly be broken down by the ordinary methods. The different sinuses may all be involved, but often the symptoms can be alleviated or remedied altogether by directing attention to one set, or to one side of the nose only. The most difficult cases to relieve are those with continuous discharge of pus or muco-pus without any other symptoms. Not now considering the major or radical operations, those patients often recover completely by living in a dry climate and high altitude. Damp cold weather always augments the trouble. The toxic varieties are often the most troublesome. Many of these cases recover completely by drainage, while others, partially only; but in all, the symptoms are markedly modified.

Why are the accessory sinuses so markedly and permenently affected while the rest of the nasal chambers seemingly recover so quickly? The mucous membrane of the nose and accessory cavities has a peculiar formation due to its varied nerve supply. This consists of secretomotor, vasodilator and vasoconstrictor, and sensation from the trifacial; all these nerves of special sense receive impulses not only from the mucous membrane of the nose but also from the skin which is demonstrated when sitting in a draft causing one to sneeze. "The mucous membrane is thick and spongy containing many glands some of which secrete a fluid rich in mucus while others secrete a fluid containing albumin and hence fall into the two catagories of mucous and serous glands." (Brubaker).

The function of the nose is to secrete thin fluid according to needs and thereby warm the air and moisten it. In addition all the air needed to carry oxygen passes through the nose, which is sifted and strained anteriorly by the vibrissae.

The fourth function of the nose, nowhere else stated, is drainage, which nature has made necessary because the higher civilization now necessitates the use of a kerchief which lower animals so far have refused to adopt. The mucous membrane of the nose has more resisting power than that of the sinuses. They are hidden or closed in a space hollowed out of or formed by thin plates of compact bone situated between the nasal cavities and the orbit, except the frontal and sphenoid sinuses and the antra. All of these open into the nasal chamber by one or several pinhole foramina, located not at the most dependent point but higher up so that drainage can only be had by capillary attraction. The mucous membrane of the nose must needs be firm and resistant to withstand pressure of more than fifteen pounds to the square inch with every effort at respiration. Not so that of the sinuses. For that reason the membrane of the nose often resists invasion of virulent bacteria which readily affects the contiguous sinuses and less often the throat, larynx and bronchi. This sensitive condition of the lining membrane of these accessory cavities is the direct cause of destruction of it .in part or whole followed by all the dire symptoms alluded to above.

Now every case following influenza must be estimated according to the resisting power of the individual. Pathological conditions may be similar; the effect produced, however, quite different. While some need complete drainage others require opening of one or two places only. While some need drastic measures others may be treated symptomatically or palliatively without breaking continuity of tissue. In fact the sinus treatment depends upon the severity of symptoms, palliative, focal drainage, separate cell opening, regional surgery or radical methods, either on one side or both. Often the further procedure depends upon discovery while under treatment. I have gone into detail somewhat, in this matter because of such diversified opinions. In the matter of acute or chronic sinusitis with discharge of pus there is but one way to treat them; but in the latent variety treatment varies, not with conditions, but symptoms.

It would seem that patients who have old or chronic exudative or quiescent sinusitis would be more susceptible to the influenza bacillus or other virulent germs during an epidemic, but such seems not to be the case. During the present epidemic I have not heard of a single case having contracted the disease so far, they are quite immune. Now how do these cases terminate, with or without treatment. Those who have pain, usually recover by drainage; when there is discharge and drainage is not inhibited the patient is exposed to all sorts of infection. I have had six cases of fatal meningitis, two developed tuberculosis. Those operated for pneumatic. drainage, and a number of muco-purulent cases becoming dry afterwards, seems as numerous as the ordinary healthy individual and just as comfortable

After the present epidemic has subsided it may be well to look out for the following, perhaps all toxic symptoms, if not for treatment, at least, for the purpose of accurate diagnosis: passive or continuous abdominal and gastric pains, gradually appearing deafness, chronic pasty pharyngitis, severe and often persistant cough, pain along branches of the sensory nerves as the trifacial, pneumogastric, especially its laryngeal and ottic branches and the glossopharyngeal. Severe and most distressing headache, pain in the eyes, usually deep-seated, partial blindness, scotoma, severe dizziness, apoplectiform seizures, etc. Of course all these conditions may be caused by toxemia from other diseases but often isolating the sinuses and no other cause can be found, treatment directed to the skull would usually prove effective.

Climate has a powerful influence on those suffering with mucopurulent discharge, or pus with rather a small number of cocci. I found by removing such patients to high altitudes where the climate is dry they recover promptly and permanently. The same effect is produced in those patients afflicted with the condition which we call catarrhal deafness where the internal ear is not involved.

In this connection it is worth mentioning that children suffer equally with adults. We were taught, as will be found in Gray's anatomy that the several accessory cavities of the nose develop from birth to puberty and therefore as they are so primitive the influenza bacilli would find them immune. We now know that these sinuses begin in early fetal life and are fairly well developed in infancy so that the children in arms as well as kindergarten and grade pupils are liable to this infection. This is important, however, that the child before puberty does not suffer so disastrously as the adult, either in fatality or permanent injury.

The present epidemic, so far not nearly as disastrous as that of '89 and the second one of 1894 and 1895, will leave much suffering in its wake long after the epidemic has been forgotten and most of it will be found located in the sinuses of the skull accompanied by a train of symptoms, differing in each patient. In acute exacerbation there is sometimes discharge accompanying the "cold" which varies in consistency from profuse watery to thick pus. The examination of the secretion may show streptococci, straphylococci, pneumococci, sometimes isolated bacilli; but rarely the influenza bacillus, often pus cells without any cocci.

Doubt as to the specific cause is as great as ever. That the several isolated or mixed bacteria, which may include influenza bacilli have assumed a highly virulent type seems probable.

But the cause of this assumed periodical virulency can never be adequately explained. Any one of them, usually mildly active, may at a time like this become highly toxic. This is shown by the findings in different parts of the country by the bacteriologists. For this reason it is so difficult to procure antitoxin which will successfully combat the disease, as in diphtheria.

Our sanitary officers deserve great credit in limiting the spread of the contagion to but a limited number of cases, in camp with many thousands of soldiers as well as in cities. In Buffalo particularly it was masterfully handled and all due to the power given to Dr. Gram to enforce sanitary laws strictly without fear or favor. I wonder whether the average citizen appreciates the efforts of our energetic and most efficient Health Commissioner.

It would seem that many patients die, but if you consider the large number of cases, you will see that the mortality is really quite low. One physician of my acquaintance treated over 700 cases recently. He encountered but four cases of pneumonia, one an asthmatic patient who died and another who had some tubercular bone lesion previously. All the others recovered, save one, a convalescent, who succumbed suddenly with acute dilation of the heart on the third day after having left her bed.

Whether that percentage will continue throughout the epidemic or not I cannot say at present. He met with primary symptoms such as hemorrhage of the bowels, also of the throat and nose. Fifty cases had severe abdominal pain and almost all had severe pain in the back.

Let me cite but a few cases exemplifying principally the latent variety of sinus disease which had never been suspected.

Case 1. Mrs. M., age 56. About thirty years ago suffered a great deal of pain over the eyes and temples anteriorly during the whole winter for six or seven years. There was so much pain in eyes that she continually changed glasses. On examination by a laryngologist nothing was found. Never had any extensive colds or much discharge. Lately some watery discharge in morning. Also had pain in right eye following an attack of grippe she says. The patient would pass for 65 so careworn and wrinkled from suffering. After ascertaining the extent of her troubles both sides were operated upon at the same time. She improved rapidly and now after three years she considers herself well and says she is most thankful.

Case 2. Female, age 29, married, no children. Severe pain back of head at base almost intolerable causing intense suffering. Pain was of a stabbing nature. Sometimes eyes blurred and at other times she couldn't see at all. The pain back of head caused much depression. Temperature normal, well nourished.

Upon examination I found she had an old ethmoid trouble which however seemed to be quiescent, no discharge nor any other indication of nasal disease. In this case I hesitated to operate because of this previous history: two years ago she had a tumor of the left ovary removed at the Gratwick Laboratory reported as carcinoma. When she began with the present pain and eye symptoms, she went to the same surgeon who found she had beginning chocked disc and concluded that she probably had a brain tumor of a cancerous nature, metastasis. He referred her to an ophthalmologist who also found the beginning chocked disc. She then saw a neurologist who corroborated the first diagnosis. She then called on a laryngologist who after having examined the nose said he could find nothing abnormal.

With such a history I could hardly be blamed for hesitating to operate on the ethmoid cells. However after four weeks treatment she was getting worse and insisted on having something done whatever the consequences. I then cleaned out the ethmoid cells under cocaine anesthesia on one side only in my office. In less than a week her symptoms had all disappeared. After some weeks I met the neurologist, related the case and he then told me that such cases often acted that way and in about six months the symptoms would appear. It is now two years and the patient is apparently perfectly well.

Case 3. A man aged 63, stocky and well built. One and one-half years ago while carrying a satchel in New York suddenly felt his hands get numb and some headache with double vision. After a few days he had completely recovered. In a second attack about ten months later he lost control of his right hand. Remained in bed for a week but recovered the use of his hand again in three days. Eight months later he had a third attack, arm became lame and mouth twitched for three days when the symptoms again wore off He was under the observation of a most competent physician who could not account for those symptoms of paralysis. He asked me to see the patient. He seemed in good physical condition, urine normal, blood pressure 140 systolic but he had an old ethmoiditis. He is now entirely well but will be kept under observation for some years.

Cases 4 and 5 were similar, both females, one aged 18 the other 38. Both developed a cellulitis, in the older one the region of the lower jaw and neck was involved, in the younger one the entire lateral neck on one side so that she could not move her head at all. Both recovered after several weeks. Both had chronic ethmoiditis.

The symptoms in the above cases were due to toxemia due to the ethmoid disease of which there was no previous history that the patients remembered. Yet no doubt these patients passed through a mild attack of one of the numerous pandemic, epidemic or endemic influenza which we observed since 1889 or they had it some time in suppurative pansinusitis, for otherwise so much destruction of tissue covering the cells could not have taken place. If no other cause can be assigned for many of the obscure symptoms causing so much pain and suffering it is well always to examine the ethmoid region or other of the accessory cavities.

1001 Main St.

Chronic Appendicitis With Pseudomyxomatous Diverticulum. Villar, Le Prog. Med., Mch. 30, reports a case in a man of 46. The appendix was enlarged and had an extra-appendicular pocket filled with gelatinous material.

Spinal Anaesthesia in War Surgery. Riche, Le Prog. Med., Mch. 30, employed spinal anaesthesia in 2200 cases between 1908 and 1918; Desplats 550. Thus consider the increase of shock a myth. They employ stovaine. For 5 c.g., 3 are eliminated in 2 hours, 1 in the third hour, ½ in the fourth.

Podalic Version.

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Of the various methods of practicing podalic version the writer's experience has been by far the greatest with what may be called the internal combined method, that is, the other hand co-operating over the abdomen. In a large experience, especially consulting and institutional, the writer has performed this operation many hundred times.

In the vast majority of cases where podalic version is indicated this method is decidedly the one of choice. The exclusively external method and the so-called Braxton Hick's method are comparatively valueless. The former frequently fails in execution or in the maintenance of the new presentation. The latter being practiced while the cervix is still only partially dilated leaving the further dilatation to be accomplished by the child is very sure to result in a dead child. The objection raised to the introduction of the hand into the uterus that it is very likely to cause infection is disproved by the experience of the writer. This subject is discussed under the head of practical asepsis. With very rare exceptions version should be followed by immediate extraction, and this especially in the interest of the child. Its accomplishment implies that the parturient canal is in condition to permit this with safety to the maternal parts and with safety to the child. In a multipara with a fully dilated cervix this condition generally obtains. In a primipara or in case of imperfect cervical dilatation the parturient canal must first be prepared.

Manual dilatation under an anaesthetic is the means generally to be employed. In cases where the dilatation will require considerable time various rubber dilators may be employed. The writer's usual practice is as follows: The external parts having been thoroughly cleaned, the vagina is irrigated with a one-half per cent solution of creoline. Both creoline and lysol have the valuable quality of being lubricant. Deep anaesthesia is generally demanded. The hand thoroughly covered with sterilized and two per cent carbolized vaseline is introduced into the vagina. The cervix is now carefully dilated by what is commonly known as Harris' method, that is one finger and the thumb, two fingers and the thumb and so on until the conically shaped hand passes readily through the cervix into the uterine cavity. The next step is to close the hand and by gradual traction withdraw the closed fist. Great care must be taken in the latter stages of this operation not to tear the cervix. The dilatation must not be hurried. The closed fist is next drawn through the vulvar orifice. In the case of primipara this also requires time, care and gentleness to guard against tears and abrasions. Whether the amount of dilatation thus accomplished will permit of rapid and safe delivery will depend upon the relative size of the foetal head and of the closed fist of the accoucheur. Additional dilatation can be readily obtained by placing the fingers of the other hand over the closed fist and slowly bringing this mass through the cervix and vagina.

With the membranes still intact and with full dilatation of the soft parts version and extraction in suitable cases can be readily done. Suitable cases are those where there is an indication for the operation, with no counter indication, and especially, no absolute disproportion between the child and the pelvis.

Cases of vertex or face presentation, where the head must be pressed aside before the hand can reach the foot within the cavity of the uterus, and in which later it must be pushed well up as the foot is brought down, present, other things equal, more difficulty than do transverse presentations where the feet are more accessible and where the head is not in the way. A small but vigorous hand is a great advantage to an obstetrician.

The novice is very apt to be impressed by the prominence of the lumbo sacral angle or promontory and is quite sure to conclude that the condition is abnormal—is one of shortened conjugate. The hand having passed this point further progress is generally easy. The introduction of the hand must be in the intervals between the pains always resting quiescently during pains. Very frequently the arms of the foetus are more accessible, more easily reached, than are the feet or legs, and are sometimes mistakenly brought down. In not a few cases the hand of the accoucheur must be introduced practically to the uterine fundus. The hand being well within the uterine cavity plenty of time should be taken to corroborate or disprove the previous diagnosis of position, and to determine the exact relation of the foetal parts. In cases where the membranes are intact one may often pass up between them and the uterine wall, finally going through them high up, perhaps after having distinctly located the various parts and decided where to grasp the proper foot. By this management often less amniotic fluid escapes and the version is insofar easier. The hand whose palm or surface naturally faces the foetal abdomen is generally the one to be introduced. The other hand co-operates over the mother's abdomen.

In all cases where the position is such that one foetal leg lies anterior to the other, the anterior leg must be brought down. This is a rule of the greatest importance. The chief reason for choosing the anterior leg is that traction upon the foetal leg cannot be far enough backwards to be in line with the axes of the upper pelvic planes but is necessarily forwards as well as downwards, with the result that if the posterior leg is brought down traction upon it brings it forward under the symphysis. This means that the foetal body is caused to rotate upon its long axis, and if as often happens, the arms go up, one or the other is quite sure to get behind the neck, and caught between it and the symphysis. This is a position from which it is very difficult to dislodge the arm, and the result is dangerous delay with very likely a broken humerus and clavicle and a dead child. Other valid reasons for choosing the anterior leg are that traction approximating the proper direction is easier, and again when the posterior leg is brought down the anterior hip is likely to catch on the symphysis. Bringing down both legs is very rarely necessary or even advisable.

A version, especially in cases of cephalic presentation, is not complete when the foot has only been brought down to just outside the cervix. The condition then is very likely to be one of the head and foot wedged in together; a condition of impaction which may be difficult to resolve. In all these cases it is of the greatest importance to work at both poles; that is while drawing down the leg to press upon the head. The writer has seen in consultation a number of cases where the attendants failed to deliver because failure to work at both poles had brought about a wedged impaction. In all the manipulations both hands, the internal and the external, work in unison. When the ankle is sufficiently low so that a fillet can be applied, traction should be made externally upon this with upward pressure upon the head and with the upward pressure by equivalent pressure downwards upon the uterine fundus. And especially in neglected cases the greatest care must be taken in upward pressure that it may not result in rupture of the uterus. The amount of force that is safe is a matter of good judgment acquired by large experience and an exact recognition of the actual state.

Version having been effected extraction follows. Pressure on the uterine fundus is of great importance. In all cases the bladder must be empty. The less the traction and the greater the pressure from above the less likely are the arms to go up and the head to become extended. The assistant exercising the outside pressure should stand high enough to make it effective. Frequently it is well that the patient who has perhaps been deeply anaesthetized should be allowed to recover sufficiently so that the uterine contractions and the bearing down efforts of the patient may be brought into play.

The leg which has not been brought down needs no attention. As soon as the body is born as far as the umbilicus a loop of the cord should be drawn down so as to give slack and guard against undue traction upon the umbilical attachment.

If the parts are well dilated and readily dilatable the final delivery is generally remarkably easy. In many of these cases the shoulders and the head almost fall out. In cases of delay at the pelvic brim firm pressure downwards towards the mother's back, not forwards towards the symphysis as is too often done, should be practiced. The assistant exercising this pressure should know upon which the occiput lies and his pressure should be somewhat towards that side of the pelvis so as to bring the wide biparietal diameter to that side of the promontory and thus avoid its engagement in the narrow conjugate. After the head has passed the brim and only then should the pressure be mostly upon the forehead or sinciput so as to insure good flexion. Two important advantages of version over high forceps are that the head enters by the smaller end of the wedge and that not being completely flexed it passes through the brim with the parietal diameter to one side of the narrow conjugate. Having entered the pelvic cavity flexion is an advantage and traction at this time should not be made before it has been obtained. This can very generally be aided by traction over the malar bones or with the fingers in the mouth. In the latter manipulation gentleness is requisite to guard against injury to the child.

When the mouth is beyond the perineum and respiration becomes possible the further delivery can be accomplished deliberately. The more complete has been the previous dilatation the less is the danger of perineal tears or of dangerous delay.

With good dilatation also, as has been said, there is rarely any difficulty in the delivery of the shoulders and head through the vulva. In many cases no particular manouver is required. In other cases the usual practice of raising the body over the symphysis and sweeping the posterior arm down over the foetal chest, then turning the other shoulder back and repeating the manouver is generally readily successful.

In cases where the arms are found to be very high up perhaps aside of the head, the introduction of the hand and arm of the accoucheur aside of the foetal body sufficiently high to reach them and bring them down is difficult and very sure to result in harm to the child and in severe lacerations of the maternal parts.

Here the method of Deventer is of inestimable value. This consists in pulling the foetus directly downwards towards the floor, the patient's pelvis being well over the edge of the operating table, the arms becoming extended aside of the foetal head and resting in the yielding sacro sciatic spaces. By this means the shoulders can be brought so low that the arms become readily accessible, and can then be delivered in the usual way. Deventer even advised to continue the traction bringing the foetal body well under that of the mother and leaving the arms in position deliver by letting the occiput and the forehand to pass from under the symphysis while the face and chin rest on the posterior wall of the pelvis and perineum.

This complete Deventer manouver the writer has practiced a few times but so far only in cases where the child was rather small.

A mistake frequently made is that seen in efforts to early turn the foetal back anteriorly. This practice is based on the fear that the occiput may turn backward and delivery thus be made unnatural and difficult. It is however a practice that is both needless and harmful.

The normal mechanism of labor demands that the head shall go through the superior strait with the sagittal suture transversely, with biparietal diameter antero posteriorly and a little to one side of the promontory; also that the hips and especially the shoulders pass through the pelvic outlet in the antero posterior diameter. Turning the back anteriorly tends to result in the head becoming caught at the brim with the occipito frontal or occipito mental diameter catching in the conjugate the shortest diameter of the brim, and in the shoulders engaging in the narrow transverse diameter of the outlet. With proper management there is absolutely no danger of the occiput turning backwards in these cases. With the hips and shoulders normally delivered in the antero posterior diameter of the outlet, the fingers are introduced alongside the face and into the mouth, this is pulled downwards and backwards towards the sacrum and the head thus rotated the delivery takes place with occiput coming from under the symphysis.

In cases where the arm is already prolapsed, it is not necessary nor generally even advisable to reposit before proceeding to version and extraction. The arm is but little in the way and its prolapse is sometimes an advantage. As soon as the proper foot is reached and is being brought down, the prolapsed arm can be grasped and by upward pressure upon it used to press up the cephalic pole, thus guarding against the doubling and wedging of the foetal parts. A fillet attached to the wrist of the prolapsed arm may serve a useful purpose in again bringing down the arm at the time of the final delivery. Care must be taken to keep it aseptic. In all these cases, of which many are neglected cases with impaction and with more or less retraction of the uterus the upward pressure must be measured and cautious, otherwise there will be great danger of rupture of the lower uterine segment. Whether in some cases attempts at version are safe is a matter for the most enlightened judgment. Of course if the child is no longer living decapitation is the operation indicated.

In cases of delayed extraction due to obstruction at the brim, and with the child surely dead, the writer has found Braun's decapitating hook hooked into the orbit, a very useful means of traction upon the after coming head. Its employment in this way may avoid a cranitolomy.

The delivery of the after coming head by means of the forceps is rarely necessary. The forceps are especially useful in cases where the delay is due to an imperfectly dilated cervix. With proper management, as has been explained, these cases should not occur.

In practically all deliveries under deep anaesthesia it is the writer's practice to deliver the placenta manually immediately after the birth of the child. With proper aseptic precautions this practice need not lead to infection nor need it result in post partum haemorrhage. The thorough irrigation of the uterine cavity with a one per cent solution of Churchill's tincture of iodine is strongly recommended in all these cases where the hand or instruments have been introduced into the uterus. The syringe nozzle or tip should be brought well up to the fundus, where its presence can be recognized by the hand over the abdomen.

Cerebral Tuberculosis. Lenoble, Le Prog. Med., Apr. 20, reports the case of a tuberculous patient with left hemiplegia. Necropsy demonstrated cerebral softening, tuberculosis being demonstrated by inoculation of a guinea pig.

Shell Turners' Pustules. Thiberge, Le Prog. Med., Mch. 30, states that the impure oil used in lathe work collects iron dust and, lodging on the skin, favors the development of pustules. The iron may cause a pigmentation.

Extraction of 472 Projectiles Under X-rays. Chauvel and Loiseleur have had this experience. Even old, encystaed projectiles yielded cultures of staphylococcus.

Vesico-Rectal Fistulae. Tuffier, Le Prog. Med., Mch. 9, states that he has seen 18 out of 20 cases heal spontaneously after cystotomy.

Three Cases of First Labor in Women With Congenital Dislocation of One Hip.*

By MARY G. HASKINS, M. D., Detroit.

Dislocation of one hip as a complication of pregnancy and labor is treated very casually in the text-books, so that one concludes that either the condition is not frequently met or that it is no serious menace to a patient during labor.

However, the presence on ones waiting list of a patient with so obvious a deformity is a stimulus to study of the case and of the literature.

These three cases add little to what has already been noted but they are perhaps of interest because the changes in the pelves are so uniform and are due in each case to exactly the same displacement of the same hip and that all are free from complications.

It is interesting to find that most of the cases reported are grouped with cases of oblique pelvis from other causes, notably infantile paralysis and hip-disease. For all practical purposes this is probably satisfactory, but the findings in these three cases are the effect of uncomplicated, unilateral, congenital dislocation of the hip.

Case 1. Mrs. B. was sent to me by a doctor up in the state who does a large country obstetrical practice. He did not make a diagnosis but decided from her appearance that hospital care would be necessary and sent her down with her mind prepared for a Caesarean section.

She was not prepossessing to look at; it was not surprising that he did not want to tackle her in a lonely farm house without help and in the poorest of surroundings.

She was short and squat in figure with unmistakable signs of early rickets, with rolls of fat around the waist and hips, with a pendulous abdomen that was thrust violently forward at every step on the shortened leg, she was 42 years of age, pregnant for the first time and was within one week of the estimated date of delivery.

The family history was negative and the personal history meager. She was a perfectly strong, well baby. The parents were poor, the family was large and the home was far in the country, so, as the little girl did not suffer at all, the lameness which developed as soon as she began to walk was treated as a dispensation of Providence and received no medical attention whatever.

Owing to the amount of fat overlying the pelvic bones it was impossible to determine accurately the position of the head of the femur or to take very satisfactory pelvic measurements, but it was evident that the pelvis was if anything a little oversize and there could be made out a difference of nearly 3 c.m. in the oblique diameters.

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*Read before the Wayne County Medical Society, September 30, 1918.

There was no fixation of the hip-joint, no limitation of motion and no lordosis.

There was a marked lumbo-sacral curve with a corresponding sidewise tilt of the pelvis, but as there was a difference of nearly 3 inches in the length of the legs, measured from the anterior superior spines to the internal malleoli, it seemed that the scoliosis was more effect than cause.

The promontory could not be reached by internal examination, but it seemed that this might be due to the difficulty in examination on account of the excessive fat, for the head was floating above the brim in this large pelvis with the patient at term so there must have been some shortening of the antero-posterior diameter.

The diagnosis of congenital dislocation of one hip was made from

1—the history of lameness from birth without disease,
2—the shortened leg without ankylosis,
3—the peculiar thrusting gait.

Two skiagraphs were made, one to confirm the position of the head of the femur and the other to determine if possible what effect the deformity was likely to have on the labor. This last was taken from the front, downward and backward, perpendicular to the plane of the inlet, in the effort to find out the amount of oblique contraction and the amount of encroachment of the promontory. They were taken at Providence Hospital when the apparatus was new and the operator unaccustomed to it and they were unfortunately very poor. The head of the femur could be made out displaced upward and backward, confirming the diagnosis, but the other plate was worthless, so the choice of method of delivering the patient had to be made without its help.

Some changes however could be deduced. The pressure of one femoral head upon the upper and back part of the innominate bone must of necessity tilt the sacrum forward, thereby narrowing the inlet and widening the outlet antero-posteriorly. The unequal pressure of the two femora must result in an oblique contraction of the pelvis and a spreading of the tuberosities, while the scoliosis, although secondary to the shortened leg, must during its development bring about a rotation of the sacrum on its long axis.

The forces which had operated on the bony girdle seemed than to have brought about a mixture of conditions which, if one might coin a name, might best be described as a rachitic, scolio-coxalgic pelvis without ankylosis.

Since the measurements were somewhat above the average and since neither the flattening nor the obliquity was likely to make trouble unless excessive, it was decided, in spite of her age, to bring on the labor and let the patient try to deliver herself.

A bougie was introduced and the cervix packed with gauze. Pains came on which were annoying but not productive and in 48 hours the procedure was repeated, this time with good results.

Dilatation occupied 36 hours but as the head engaged and became well fixed during that time, and as the patient was in the hospital and the family under control, she was allowed to go on without interference.

After the rupture of membranes the head was 4 hours in descending and rotating but at no time was there a let-up in the contractions until the head was on the perineum, when they became ineffectual.

Low forceps were undoubtedly indicated, but this time I was so much interested in seeing the patient deliver herself that, although the use of pituitrin was in its early days, I gave her one ampoule, not without misgivings.

Pains recommenced and although the delivery was slow it was accomplished without forceps and with the baby in excellent condition.

The whole labor had lasted a little over 40 hours.

Case 2. Mrs. J., aged 37, and pregnant for the first time. She too had been perfectly well as a child and her lameness was noticed only as she began to walk.

This family was in a very different social class from the first one and medical advice was sought at once. The family physician made the diagnosis but advised no treatment other than keeping the patient in the best of physical condition. She never suffered from the lameness in the least except as a handicap in dancing and skating with other children.

Her measurements except for the oblique diameters were normal. Plates made by Dr. Vine Larue Smith showed the same upward and backward displacement of the head of the femur and the same spread of the tuberosities. In this case we also got a very good picture of the superior strait, showing a marked forward projection of the promontory and a moderate obliquity.

This patient was seen long enough beforehand so that she could have some preparation for her labor. She had a warm sitz bath every night and a teaspoonful of sodium phosphate every morning before breakfast for six weeks before delivery.

Either because of the treatment or in spite of it she went into labor on the exact date estimated and was delivered spontaneously after labor of 17 hours.

She too was given a dose of pituitrin when pains became ineffectual during the second stage.

Case 3. Stella H., aged 21, pregnant for the first time and lame from infancy, differs from the other cases in that she had much treatment in her childhood. Her family lived in Ann Arbor and when her lameness was discovered as she began to walk she was taken to the clinic at the University Hospital and was under treatment for over 2 years.

Several operations, one of which at least was an open operation, were undertaken for the reduction of a congenital dislocation. As a result she has a scar on the thigh, a slight adduction of the femur and a moderate stiffening of the hip-joint.

With these exceptions the findings are identical with those in case 2, as is shown in good plates made by Dr. Hickey.

Her pelvis was full size and as the baby seemed small she was allowed to go nearly 2 weeks over the estimated date for her delivery, at the end of which time labor started spontaneously and she delivered herself in 11 hours. She was given the same preliminary treatment as case 2.

Although few in number these cases cover rather a wide range;

1—They vary in age from 21 years to twice that number.

2—They vary with regard to early care from total neglect to strenuous care by experts.

3—The time of beginning labor varied from the day estimated to 2 weeks past that time.

4—The length of the labors varied from 11 hours to 40.

5—Two cases were under observation early, the other was not seen till term.

6—The weight of the baby in the first case was 7½ lbs., in the second 7 lbs. and in the third 6 lbs.

Consideration of these three cases would lead to the conclusion that in spite of the appearance of serious lameness the changes in the bony pelvis resulting from congenital dislocation of one hip are negligible so far as interference with parturition is concerned. And this corresponds with the statements in the text-books.

However, from the nature of these changes it would seem that in no particular case would one be justified in predicting so fortunate an outcome. In a patient with even a slight general contraction of the pelvis, or in one with even a slight oversize of the fetal head, labor is liable to arrest with the head above the brim, necessitating for its relief one of the severer obstetric operations, axis-traction forceps, version or Caesarean section.

In other words, in spite of the apparent ease of delivery in these cases it is not safe to generalize and every case should be the subject of careful study.

270 Woodward Ave.

TOPICS OF PUBLIC INTEREST

Army Casualties. At about 50,000 total casualties in the American Expeditionary Force up to Oct. 18, the definite losses remain high in comparison with most other statistics of the kind: a trifle over a third dead, over 11% missing or known to be prisoners, while an allowance of less than 10% of non-returnable wounded brings the definite losses above the 50% line. The proportions hold good to date.

German Birth Rate and Infant Mortality. The live births for 1913 were 1,839,000; for 1914, 1,820,000; for 1915, 1,416,000; for 1916, 1,103,000. The reduction of 40% is what might be expected under war conditions. These statistics are also of interest in connection with the rumor that Germany had deliberately underestimated her population in advance of the war. It will be noted that the 1913 (normal) birth rate is only a little over 25:1000 on a basis of the published population of about 67 million whereas our own birth rate is about 35:1000. Yet Germany has been regarded as a prolific nation and the United States, for a large part of its population, has been accused of race suicide. If as has been claimed by some, Germany had a population of 90 million, the 1913 birth rate would represent only a small fraction over 20:1000, which is about the minimum death rate of a country without marked immigration. Infant mortality had been reduced in Germany from 151:1000 in 1901 to 95:1000 in 1912. During the early stages of the war, it rose to 200 and, in places, to 300. Infantile marasmus is said to be common and rickets to occur in 23-43% of the infantile population. This is one of the details establishing the paradox that war does not change the proportion of the adult portion of the population to the degree that might be expected.

Removal of Physicians to Cities. Semi-official warning has been issued in regard to the exodus of physicians from small towns to cities, under the altered competitive conditions due to the war. As the entire medical profession is already being called upon for public service and as exemption, in case compulsory service becomes necessary will be based on the local needs of the population for medical attendance, it is obvious that steps may be taken to prevent removal. On the other hand, if the war should be ended soon, the discharge of medical reserve officers will remove the factor which tempts to such removals.

Centenarian. Mrs. Catharine Churchill, born in County Clare, Ireland, in 1814, was taken to the Chautauqua Co.

Hospital last year, on account of the enlistment of an adopted son. She jumped out of a window in an attempt to return to her home on a small farm and broke a leg. Almost complete restoration of function took place and she is now in good health. Mrs. Addison Burton of Ripley, aged 98, has recently cast her first vote, being probably the oldest woman voter in the state. She is closely followed by a Corning woman aged 95.

Military Casualties and Deaths. Up to Oct. 31, Australia had sent 336,000 troops from a population of 5,000,000, with a total of 290,191 casualties (nearly 90%) but only 54,431 deaths (a little less than 20%). The U. S. had sent to Europe about 2,200,000 troops from a population of over 100,000,000 (about 1,550,000 troops remaining in America), had sustained only 62,638 casualties (less than 3%) with 20,631 deaths (over 30%). The high percentage of our fatal casualties is difficult to explain.

Birth Statistics. The birth registration area, including 33 million, had a birth rate in 1916 of 24.8:1000 population, against a death rate of 14.7. The foreign born mothers comprised 66.3% in Connecticut, 52.84% in N. Y., down to 14.82 (whites only) in Md. The deaths under one year were 101:1000 in 1916, 100 in 1915. The range was from 70:1000 for Minn. to 121:1000 for Md. but only 101 for white infants. The mortality for children of Scandinavian mothers was 68, Polish 148, Negro 184. The mortality of male infants was decidedly higher than for females. The excess of births over deaths was about 1% for the whole area and up to about 2% for a few localities, while some showed a diminution on account of a large negro population.

Volunteer Medical Service Corps. The Council of National Defense has adopted the following classification: I. under 55, no physical disability, no dependents or adequate means. II. Same, not more than three dependents. III. More than three dependents or excluded from first two classes as needed by the community, an education institution, health dept. or some industry. (For example, by the commissioning of Dr. D. C. Main of Alfred, N. Y., Oct. 30, as Capt. M. C., this village is left without a physician). IV. Over 55 or disabled so as to be ineligible for commission. These will be recorded for possible future needs but will not be enrolled. State and County subdivisions of the work of the Council have been arranged, to facilitate enrollment.

Members of this corps are paid $200 a month traveling expenses and maintenance while on duty, for the present the payment being assumed by the American Red Cross. On Sept. 27, a call by Surgeon General Rupert Blue of the P. H. S. for 500 physicians to assist in caring for the influenza epidemic, was met within 72 hours and a second request for the same number resulted in a total of 1,135 by Oct. 1, names of volunteers continuing to come in so as to provide an adequate reserve list.

Field Clerks and Nurses, Prisoners of War, will, by a recent ruling, receive pay during captivity, the same as officers and soldiers.

PERSONAL

Dr. Harry O. Maldinger of N. Tonawanda, in service in France, writes of the subsidence of influenza among troops and of his own recovery after an attack.

Dr. Bert John Bixby of Buffalo has been commissioned captain in the Medical Corps of the Army.

Dr. Wm. Stephen Driscoll of Buffalo has been commissioned captain, M. C.

Dr. Franklin C. Gram, Acting Health Commissioner of Buffalo, was forced to leave the work of the dept. in temporary charge of Dr. George S. Staniland for a few days during the influenza epidemic, on account of tachycardia due to overwork.

Capt. Ulysses B. Stein of Buffalo was ordered to Camp Greenleaf for instruction, late in Oct.

Capt. Henry R. Lohnes of Buffalo was ordered to duty at General Hospital No. 22 at Richmond, late in Oct.

Dr. George E. Blackham of Dunkirk sustained a fracture of the left shoulder in an automobile collision Oct. 8 and was treated at the Brooks Memorial Hospital.

Col. Albert H. Briggs of Buffalo has moved his office to 1312 Main St. and his residence to the Buckingham, Allen and Mariner Sts.

Dr. Chaffee of Brooklyn has moved to Binghamton and opened an office for the practice of surgery at 100 Hawlet St. He has been on the staff of the Polyclinic of N. Y. City for 25 years and was the founder and a former president of the N. Y. and N. E. Assn. of Railway Surgeons.

Dr. Anna P. Walsh of Buffalo, has completed her interneship at Bellevue and returned to Buffalo.

Dr. W. W. Plummer of Buffalo who went to France a year ago, has been promoted to the rank of major and assigned as consultant to a group of base hospitals in the St. Mihiel sector.

MILITARY PERSONALS

Dr. Frederick W. Parsons of Poughkeepsie, a graduate of the University of Buffalo, has been in medical service in France for nearly two years. In August, he was placed in charge of Base Hospital 117 and, on Oct. 1, was promoted to his majority.

Capt. A. L. Benedict of Buffalo, was transferred from the Gas Defense Plant, Long Island City, to the Base Hospital, Camp Dix, Nov. 9.

Lt. Milton Bork of Buffalo has been transferred from New Haven to Camp Jackson, Columbia, S. C.

Major John A. Rafter of N. Tonawanda, formerly an editor of this journal, has been in charge of the establishment of emergency hospitals at training camps. He visited his home on leave in Nov.

To Camp Crane, Lieut. D. S. Dooman, Buffalo.

To Camp Dix, Lieut. R. E. Elliott, Rochester.

To Camp Dodge, Capt. Ross B. Nairn, Buffalo.

To Camp Holabird, Lieut. B. J. Slater, Rochester.

To Fort Oglethorpe, Lieut. A. Winkelstein, Syracuse.

To Fort Slocum, Lieut. F. N. Potts, Buffalo.

To New Haven, Lieuts. W. G. Hayward, Jamestown; W. E. Zielenski, Buffalo.

To report to the commanding officer, Eastern Department, Lieut. S. W. Thompson, Oswego.

The following have received orders, having already been in active service:

Capt. E. C. Koenig, Buffalo, to Camp Crane, Pa.

Lt. R. G. Fowler, Buffalo, to Camp Upton.

Lt. L. H. Wheeler, Lockport, to Ft. Oglethorpe for instruction.

The following have been commissioned and given first orders:

Lt. R. S. Cooper, Syracuse, to Camp Devens.

Major J. P. F. Burke, Buffalo, to Base Hospital, Camp Jackson, S. C., for instruction.

Capt. B. J. Bixby, Buffalo, to Ft. Oglethorpe for instruction.

Capt. T. D. Buck, Rochester, same.

Capt. T. F. Cole, Romulus, same.

Lt. H. H. LeSeur, Batavia, same.

Lt. H. M. Kenyon, Binghamton, same.

Lt. O. S. McKee, Buffalo, same.

Lt. A. L. Weil, Buffalo, same.

Lt. S. T. Hamilton, Elmira, same.

Lt. F. H. Goddard, Rochester, same.

Lt. A. C. Scinta, Rochester, same.

Lt. E. J. Wendel, Rochester, same.

Lt. A. T. Lawless, Syracuse, same.

Capt. C. J. Carr, Buffalo, to Hoboken.

Capt. E. A. French, Rochester, same.

Lt. R. Robinson, Lackawanna, same.

Lt. G. M. Brandt, Seneca Falls, to Camp A. A. Humphreys.

Capt. F. A. Mendlein, Buffalo, to Camp Devens.

Lt. F. Barber, Rochester, to Camp Holabird, Md.

Lt. A. Regan, Buffalo, to Camp Lee.

Lt. F. M. Carpenter, Rochester, to Camp Lee.

Capt. W. H. Mansperger, Buffalo, to Base Hospital, Camp Meade, for instruction.

Lt. J. F. Beiermeister, Rochester, same.

Lt. H. C. Schuhr, Buffalo, to Camp Sevier.

Lt. R. V. Laurence, Rochester, to Camp Sevier.

Capt. W. J. Bott, Buffalo, to Camp Upton.

Lt. E. J. Wendell, Rochester, to Camp Zachary Taylor.

Capt. E. H. Vail, Churchville, to Ft. Oglethorpe, for instruction.

Capt. E. J. Phillips, Corfu, same.

Capt. A. H. Rodgers, Corning, same.

Capt. J. J. Klein, E. Aurora, same.

Capt. H. C. Potter, E. Rochester, same.

Capt. A. M. Johnson, Rochester, same.

Capt. G. C. Whitney, Rochester, same.

Lt. O. E. White, Akron, same.

Lt. J. A. Kneller, Attica, same.

Lt. R. N. de Dominicis, Buffalo, same.

Lt. J. Heller, Buffalo, same.

Lt. A. W. Palmer, Buffalo, same.

Lt. M. A. Losee, Livingstonville, same.

Lt. J. C. Flynn, Rochester, same.

Lt. A. R. Hurley, Rochester, same.

Lt. R. B. Partridge, Rochester, same.

Lt. W. D. Wolff, Rochester, same.

Lt. D. G. Lenhart, Spencerport, same.

Capt. M. R. Waterman, Brockport, to Neurologic Institute, N. Y.

Capt. H. R. Lohnes, Buffalo, to Richmond, Va.

Lt. J. C. O'Gorman, Buffalo, to Camp Dix, Base Hospital.

Capt. D. S. Bellinger, Buffalo, to Base Hospital, Camp Meade.

Capt. R. S. Taylor, Buffalo, to Camp Shelby, Miss.

Capt. J. S. Lewis, Buffalo, to Ft. Oglethorpe, for instruction.

Capt. U. B. Stein, Buffalo, same.

Capt. Harry R. Trick, Buffalo, same.

Capt. F. Zingsheim, Buffalo, same.

Capt. B. A. Barney, Hornell, same.

Capt. F. R. Pickett, Olcott, same.

Lt. L. F. Anderson, Buffalo, same.

Lt. J. S. Gian Franceschi, Buffalo, same.

Lt. J. L. Kearney, Buffalo, same.

Lt. W. S. Lynch, Buffalo, same.

Lt. G. P. Michel, Buffalo, same.

Lt. F. Seilheimer, Buffalo, same.

Lt. F. Terrasse, Buffalo, same.

Lt. E. L. Villiaume, Buffalo, same.

Lt. C. A. Wisch, Niagara Falls, same.

Lt. R. P. Regan, N. Tonawanda, same.

Lt. C. J. Gian Franceschi, Rochester, same.

Lt. F. H. Stanbro, Springville, same.

Capt. E. G. Whipple, Rochester, to New Haven.

Capt. C. R. Orr, Buffalo, to Yale Army Medical School, for instruction.

Lt. L. J. Strong, Buffalo, same.

Lt. A. M. Wagner, Buffalo, to Camp Crane, Pa.

Capt. H. J. Bentz, Buffalo, to same for instruction.

Capt. J. H. Carr, Buffalo, same.

Lt. C. W. Bethune, Buffalo, to Camp Dix, Base Hospital.

Capt. A. E. Brennan, Buffalo, to Ft. Oglethorpe, for instruction.

Capt. F. St. John Hoffman, Buffalo, same.

Capt. F. B. Willard, Buffalo, same.

Lt. H. B. Brownell, Buffalo, same.

Lt. J. M. Flannery, Buffalo, same.

Lt. J. N. Kiefer, Buffalo, same.

Lt. S. A. Moore, Buffalo, to Ft. Oglethorpe, for instruction.

Lt. A. G. Ostwald, Buffalo, same.

Lt. F. H. Palmer, Buffalo, same.

Capt. G. A. Marion, Rochester, same.

Lt. P. C. Campbell, Buffalo, to Hoboken.

Lt. J. L. Gallagher, Buffalo, same.

Lt. E. P. Reimann, Buffalo, same.

Lt. J. A. Burns, Wilson, same.

Lt. F. D. Carr, Batavia, to Yale Army Laboratory School, for instruction.

Capt. G. C. Fisk, Buffalo, to N. Y. Neurologic Institute.

Capt. J. P. Barr, Buffalo, to commanding general, Southeastern Dept. (Charleston, S. C.)

Capt. B. H. Brady, Buffalo, same.

Lt. D. Brumberg, Buffalo, to Syracuse.

Capt. D. C. Main, Alfred, to St. Elizabeth's Hospital, Washington.

Capt. J. F. Shanahan, Buffalo, to same for intensive training.

Lt. V. Reinstein, Buffalo, same.

The following already in service have been ordered:

Capt. E. C. Koenig, Buffalo, to Cornell Medical College, N. Y.

Capt. H. B. Pritchard, Syracuse, to Camp Crane, Pa.

Lt. D. S. Dooman, Buffalo, same.

Lt. B. W. McCuen, Syracuse, to Camp Crane.

Lt. J. J. Finnegan, Buffalo, to Base Hospital, Camp Devens.

Lt. R. E. Elliott, Rochester, to Camp Dix.

Capt. B. Ross Nairn, Buffalo, to Camp Dodge, Ia., to examine the command for nervous diseases.

Lt. B. J. Slater, Rochester, to Camp Holabird, Md., (revoked).

Lt. A. Winkelstein, Syracuse, to Ft. Oglethorpe, for instruction.

Lt. F. N. Potts, Buffalo, to Ft. Slocum and on completion of duty to Washington. Later ordered to Camp Meade.

Lt. W. E. Zielenski, Buffalo, to New Haven.

Lt. F. C. McClellan, Canandaigua, same.

Lt. D. Jung, Buffalo, same.

Capt. J. R. Brownell, Perry, to Camp Crane, Pa.

Lt. R. L. Cooley, Buffalo, same.

Lt. M. A. Thompson, Buffalo, same.

Major H. R. Gaylord, Buffalo, to Camp Wheeler, Ga.

Major E. A. Southall, Buffalo, to Columbus, Ga.

Lt. P. H. J. Buckley, Buffalo, to Evacuation Hospital, Ft. Oglethorpe.

Capt. M. B. Palmer, Rochester, to Washington.

Lt. T. M. Calladine, Perry, to Army Medical School, for instruction.

Lt. J. F. Browne, Rochester, to Carnegie Institute and University of Pittsburgh.

Lt. J. J. Leary, Utica, to Camp Wadsworth, Va.

Lt. W. A. Behan, Binghamton, to Colonia, N. J.

Lt. H. L. Prince, Rochester, to Walter Reed Hospital, D. C.

Lt. T. L. McNamara, Corning, to Rahway, N. J.

Lt. J. L. Kinner, Elmira, to Rockefeller Institute, for instruction and then to Camp Meade, Base Hospital.

OBITUARY

Lt. Martin F. Nolan, Buffalo 1912, of N. Tonawanda, died in the military service in France, Oct. 8, of pneumonia, aged 32. He went overseas in July 1917. He had been exposed to pneumonia in line of duty. He was a brother of Brig. Gen. Dennis Nolan and Lt. Col. Daniel Nolan.

Dr. Salina P. Colegrove, Buffalo 1888, died at her home in Salamanca, Oct. 21.

Dr. Joseph T. Cox, Chicago Homoeopathic 1888, Health Officer of Penn Yan, died of influenza Oct. 24, having been exposed in his official duties.

Dr. Bradford Augustus Richards, McGill 1901, died at his home in Rochester, Oct. 22, of pneumonia. He specialized in eye, ear, nose and throat.

Dr. Ella Florence Preston, Eclectic Institute of N. Y. 1882, died at her home in Dansville, Oct. 15, aged 70.

Dr. William F. Elmendorf, Buffalo 1890, died at his home in Buffalo, Sept. 28, of spinal meningitis, aged 64.

Capt. Victor Moreau Rice, Buffalo 1904, of Batavia, died of pneumonia, complicating influenza, at the General Hospital at Ft. Oglethorpe, Oct. 13, aged 38. He was taken sick while a student officer at Camp Greenleaf.

Dr. Gardner Byron Young, Bellevue 1886, died at his home in Geneva, Oct. 1, aged 58.

Dr. Harry Mayer Schall, Jefferson 1887, of Rochester, died in the General Hospital of that city, Oct. 9, of heart disease, aged 55.

Dr. John G. Hoeckh, Buffalo 1907, died at his home in Buffalo, Oct. 5, of pneumonia, aged 33.

Dr. Rufus A. Egbert, died of influenza Oct. 29 at Custer City, Pa.. where he had practiced for 40 years. He was 69 years old.

Dr. W. H. Monagan, died of influenza Oct. at his home in Mount Alton, Pa.

Dr. George W. Gorrill, Buffalo 1900, Supt. of the Buffalo State Hospital, died suddenly Oct. 27, aged 41. He was born in Ontario, served as intern at the Sisters' Hospital, joined the staff of the State Hospital Jan. 9, 1902, was made first assistant physician in March 1911 and succeeded Dr. Hurd as Supt., July 29, 1918.

Dr. James E. Culbert, Niagara 1892, died Oct. 26. He was a member of the staff of Mercy Hospital.

Dr. Walter E. Gregory, Buffalo 1889, long a member of the staff of the Jackson Health Resort, died at Dansville Oct. 26, of Pneumonia, complicating influenza. He had retired from practice but had volunteered for work during the epidemic.

Dr. Frank E. L. Brecht, Buffalo 1872, one of the oldest practicing physicians of Buffalo, died at his home Oct. 30, of influenza, aged 73. He was born in Saxony but had lived in Buffalo for 60 years. He was assistant health physician in the early 70's under the late Dr. E. C. W. O'Brien.

Dr. Warren H. Loomis, Long Island Medical College 1878, died at the City Hospital of Lockport Oct. 30, aged 63, of influenza. He was born in Palermo, N. Y. but had been in practice in Lockport since 1889. He attended the University of Buffalo before going to the college at which he graduated.

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Functional Cardiac Troubles in Soldiers. Clerc and Aime found a history of rheumatism in 3.5%. They insist on the instability of cardiac conditions, especially tachycardia, which was usually of moderate degree. They state epigrammatically that, instead of discharging (in French, reforming) the soldier, the diagnosis should usually be discharged. They do not consider it possible to adopt a precise classification but like the English term of Unstable Heart.

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Early in September the facilities of the Glenolden Laboratories were offered to the hospitals of Philadelphia to aid in the investigation of the cause of influenza and particularly the pneumonia complications. Material was sent from the Philadelphia Hospital, U. S. Naval Hospital and other institutions for study. Fifteen strains of the influenza bacillus and virulent strains of streptococcic hemolyticus taken from the material sent in from the hospitals were added to the influenza bacterins to insure their greater specificity.

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The pneumonias following the attacks were known to be due to the pneumococcus and streptococcus, consequently antipneumococcic and antistreptococcic serums were prepared in large quantities to meet the requirements.

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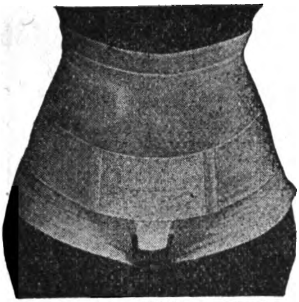

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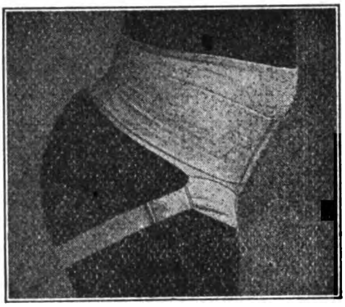

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It is too early to supply exhaustive statistics, but enough evidence has been accumulated to fully justify the employment of Influenza Serobacterin or Influenza Bacterin Mixed, for the prevention and treatment of Influenza. It has been amply demonstrated that patients immunized by the bacterins rarely acquire Influenza and those who take the disease are practically insured against complication of the pneumonias which have proved so fatal during the recent epidemic.

Primary Cancer of Lung. L. Galliard, Le Prog. Med., Apr. 6, describes a case demonstrated by X-ray.

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Abstract

Projectile in Heart. Petit and Villeon report a case in which a ball the size of a small bean was lodged subpericardially, in the posterior wall of the ventricle. It was removed by the trans-pleural-pulmonary route and the patient was shown 6 days after operation. Rastoul, ibid., reports a case of removal of a ball from the pericardium, shortly after the receipt of the wound, and of the removal of a ball from the anterior part of the left ventricle, by vertical incision of the pericardium and lifting the heart. Large pneumothorax developed in both cases but they recovered.

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Tuberculous Peritonitis Opening at Umbilicus. Achard and Leblanc, Le Prog. Med., Apr. 27, report a case in a man aged 62 who had fever and ascites in 1917, with development of pus in the left side of the abdomen and discharge through the umbilicus. The general health, however, improved and 10 kilos were gained. The pus produced tuberculosis in a guinea pig. Usually such cases are exceedingly grave, either in adults or children. Operative intervention was considered advisable in spite of the improvement.

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Abstracts

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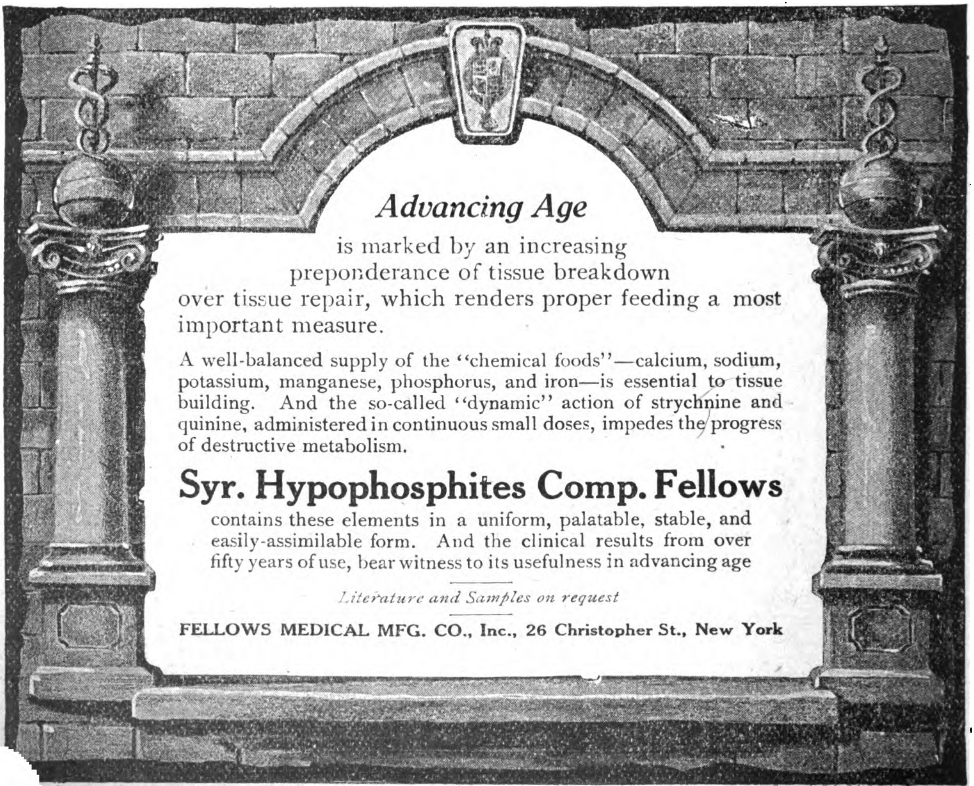

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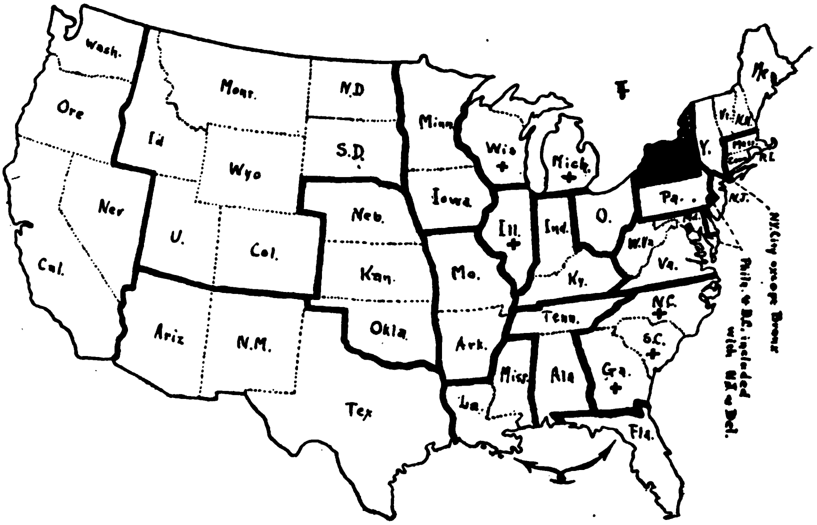

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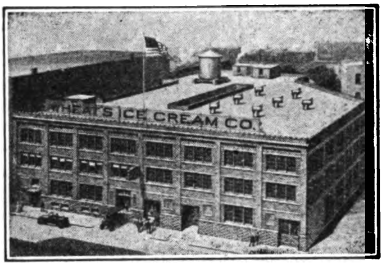

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Abstracts.

Wound Shock and Vaso-Motor-Center. W. T. Porter of Boston and E. Emerson of Providence, Boston Med. & Surg. Jour., Aug. 22, having previously shown that fat embolism is a frequent cause of wound shock, have continued their experiments to show that the shock is due to plugging of the bulbar vaso-motor region. For instance, in a 2 Kg. 1/5 c.c. of neutral olive oil injected into the subclavian ligated at its origin and just before the giving off of the vertebral branch, reduced the arterial tension from 160 to 40 m.m. The amount of oil was proportionately as well as actually less than has actually been demonstrated in traumatic human cases. It may be of interest to antivivisectionists to know that this is one of very few modern vivisections performed with curare. We are, however, strongly inclined to doubt the reputed motor paralysant action of this drug with complete absence of anaesthesia. Such an action is supported by only a few and rather old and unscientific observations of human arrow poisoning and it has never been explained just how the sensations of the victims were communicated.

Spinal Lavage. Rosenthal, Le Prog. Med., Apr. 19, employs an isotonic solution of sodium chlorid and citrate, with the idea of breaking up false membranes.

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